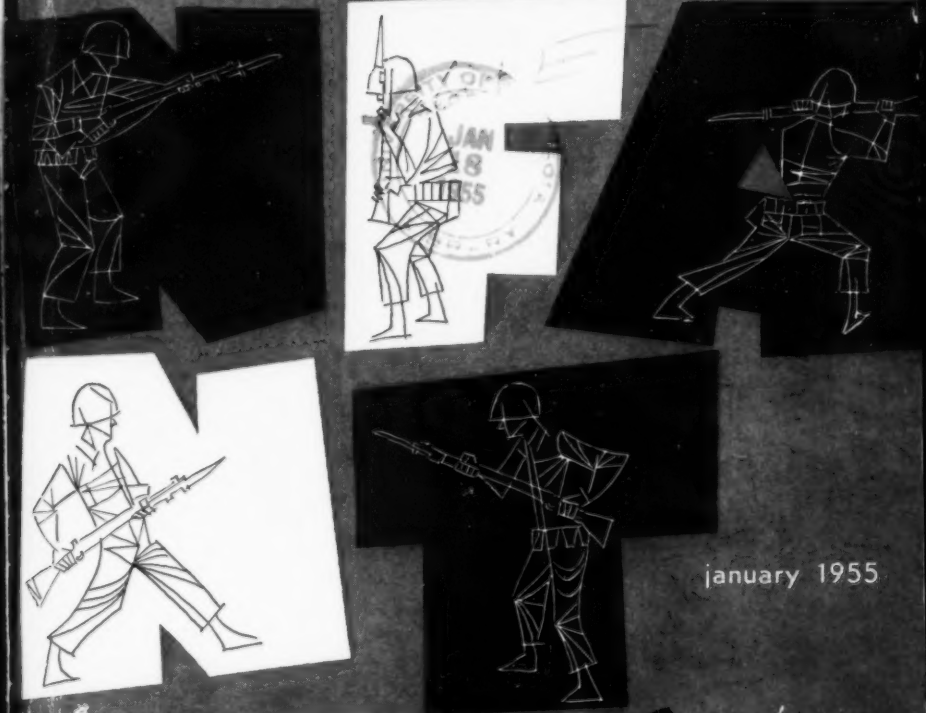
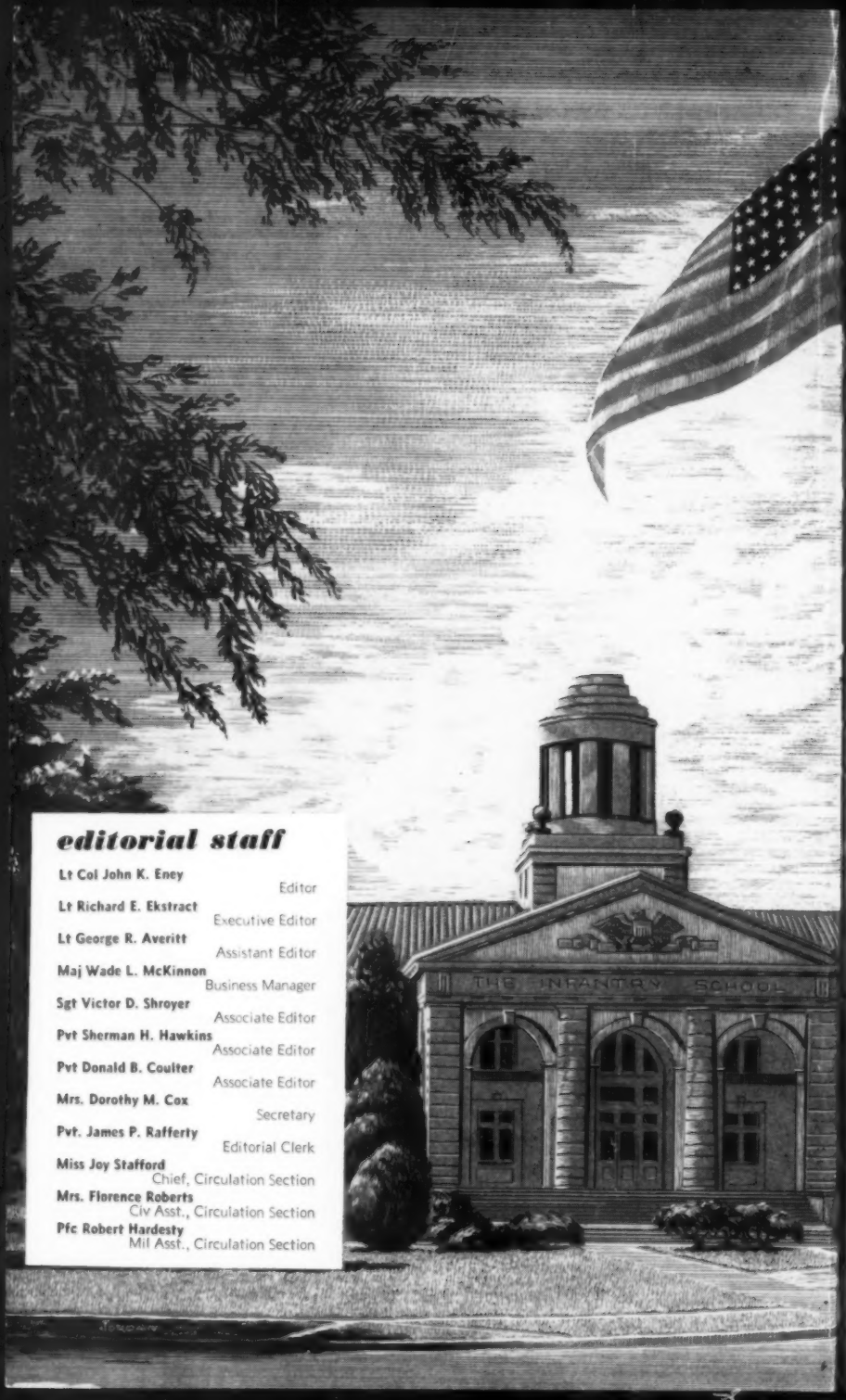
the Infantry

school quarterly

he magazine for Infantrymen



january 1955



editorial staff

Lt Col John K. Eney
Editor

Lt Richard E. Ekstract
Executive Editor

Lt George R. Averitt
Assistant Editor

Maj Wade L. McKinnon
Business Manager

Sgt Victor D. Shroyer
Associate Editor

Pvt Sherman H. Hawkins
Associate Editor

Pvt Donald B. Coulter
Associate Editor

Mrs. Dorothy M. Cox
Secretary

Pvt. James P. Rafferty
Editorial Clerk

Miss Joy Stafford
Chief, Circulation Section

Mrs. Florence Roberts
Civ Asst., Circulation Section

Pfc Robert Hardesty
Mil Asst., Circulation Section

355.07
Inf 3

THE
Infantry
SCHOOL QUARTERLY

volume 44 number 4 january 1955

the infantry school

Maj Gen Joseph H. Harper
Commandant

Brig Gen Carl F. Fritzsche
Asst Commandant

Col Thomas Mifflin
Deputy Asst Commandant

Col Orrin C. Krueger
Deputy for Combat Developments

departments

Col Blair A. Ford
Staff

Col Joseph W. Stilwell, Jr.
Tactical

Col Gerald C. Kelleher
Ranger

Col Robert E. Holman
Automotive

Col Charles F. Leonard
Weapons

Col Charles F. Mudgett, Jr.
Non-Resident Instruction

Col Leland C. Cagwin
Airborne

Lt Col Melvin Fletcher
Communications

academic staff

Col John M. Lynch
Operations Officer

Col Frank T. Mildren
Director of Instruction

Col Edward P. Smith
Secretary

Lt Col Arlo W. Mitchell
Chief, Publications and Visual Aids Office

articles

1 **Invasion** by Lt Col Roy E. Creek

19 **A Panoramic Sight for the 81mm Mortar** by Lt Wm. R. Richardson and Lt Warner S. Goodwin, Jr.

24 **Mobile Defense** by Maj Linwood A. Carleton

38 **Are You Eating Yourself to Death?** by Maj Wm. D. Brodbeck

47 **So You Have to Prepare a Field Exercise** by Capt Charles L. Butler

62 **Help for the S2** by Lt Col Cecil C. Helena

71 **Meet the Provost Marshal** by Lt Col Ralph B. Vote, Jr.

75 **CP at Your Fingertips** by Maj Roderick A. Stamey

82 **The Equalizer** by Lt Singleton Keesler

93 **Height of Battle** by Maj Robert Winkler

102 **Leadership in the Balance** by Capt Marion D. Joyce

features

2 **Letters to the Editor**

4 **Editor's Page**

23 **Quiz**

56 **What's New!**

60 **Soldier** by Major General C. T. Lanham

66 **How Would You Do It?** by Lt Col Donn R. Pepke

70 **Star Unit . . . The 211th Infantry**

81 **The Day George Washington Almost Got His** by Cpl Frederic G. Sanborn

Published quarterly by The Infantry School, Fort Benning, Ga. Entered as second-class matter June 11, 1948, at the Post Office, Columbus, Ga., under the Act of March 3, 1879. Subscription rates: 1 year, $2.50; 2 years, $4.75; 3 years, $7.00. Four copies a year. Foreign subscribers add $.25 yearly for postage. Address subscription applications to THE BOOK DEPARTMENT, THE INFANTRY SCHOOL, FORT BENNING, GA.

FEB 29 57 U OF M BINDERY

1532835

letters

Dogs

Ft. Benning, Ga.

Sir:

Enjoyed reading the article "Scout Dogs on Patrol" by Lt. Paul F. Gorman in the July issue. His experiences with scout dogs were very similar to mine in some respects. Lt. Gorman outlined the limitations and handicaps under which these dogs worked and indicated that most of these handicaps could be easily overcome by careful planning and utilization of experienced personnel. I can't quite agree. After making several patrols with scout dogs, I thought their combat value open to question.

Scout dogs lack the ability to operate effectively in inclement weather. They cannot stand prolonged cold when not moving (as our soldiers were required to do, and as I have seen Laborador retrievers do many times). High wind from any direction greatly diminished their effectiveness, too.

. . . I must say that dog handlers accompanied more patrols than normal line soldiers. These handlers accompanied patrols in units with which they were not familiar, following unfamiliar SOP's and often went on patrols inadequately briefed. It is no wonder that these men were sometimes apprehensive.

The considerations mentioned by Lt. Gorman such as wind direction, layers of air, bodyguard for the dog handler, etc., are a lot for a harried patrol leader to worry about considering the marginal return.

Capt Robert L. McDaniels

Blank Fire Attachment

Hq Co I, 122d Infantry
Georgia National Guard
Louisville, Georgia

Sir:

. . . information has been received by this unit that there is an attachment for the Caliber .30 Machine Gun M1919A6 that may be used to make the gun fire blank ammunition.

Request information as to whether or not there is such an attachment and how this unit may make or secure one.

Joseph R. Blandford, Capt

The above letter was received by the Weapons Department of The Infantry School and was forwarded to The Infantry Quarterly. Regular readers will remember the article, "Fire Blanks with the Light Machine Gun" by Mr. Ray S. Miller, in the October, 1953 issue.

(The attachments may be requisitioned through normal supply channels. The stock number is—Attachment, blank-firing, M9 A006-71-62790.)

Bettering the Best

Co F, 10th Inf, 5th Div.
Germany

Sir:

. . . Enclosed is $2.50 for the best publication of the best information an Infantryman can get.

Walter Johnson, Sfc

Thank you very much—we'll keep trying to make the "best publication" even better!—Editor.

... to the editor

Reprints

Camp Losey, P.R.

Sir:

Permission is requested to reprint the article "The New Operation Order," by Capts James T. Root and Bickford E. Sawyer, published in the July 1954 issue of The Infantry School Quarterly.

If permission is granted, the article will be reproduced and distributed to all officers and non-commissioned officers of the 296th RCT.

Casimer S. Gappa, Capt

We were happy to grant reprint permission. This is one of many such requests that we receive. The majority are approved. Our copyright restrictions, however, do not allow us the right to offer blanket reprint permission. Please address all such requests to The Editor, The Infantry School Quarterly, Fort Benning, Georgia.—Editor.

Plainer in Plastic

Hq, The Army Security Agncy
Tng Ctr
Fort Devens, Mass.

Sir:

Reference Capt Wolf's article "It's Plainer In Plastic," July 1954 issue.

Could you give us some additional information:

What is the best thickness of plastic to use to avoid throwing any portion of the projected image out of focus? Is the plastic dyed? What cement is used?

Lloyd K. Taylor, 1st Lt.

Our model varied in thickness between ⅛ and ¼ of an inch (depending on the part represented). The plastic was not dyed—we purchased ready colored plastic. We did not use cement; we found nitric acid to be an excellent bonding agent.

You will be interested to know that plastic working models are presently manufactured under government contract as Ordnance items of issue.

—Editor.

Meet the Author

It will come as no surprise to those who are familiar with the writings of Major General C. T. Lanham that his poem "Soldier" was selected to shatter a precedent. This poem, which we feel captures the Infantry spirit as none other has done, is the first poetry to appear in this magazine. It was written when the author was a 1/Lt and originally appeared in Harper's Magazine in 1932.

General Lanham, now Deputy Commandant of the Armed Forces Staff College was graduated from the United States Military Academy in 1924. His command experience ranges from platoon to division. He saw combat in Europe during WW II and, prior to assuming his present duties, commanded the 1st Division. General Lanham has also had extensive high level staff experience.

We believe you will enjoy "Soldier" which appears on page 60.

Editor's Page

Dear Reader:

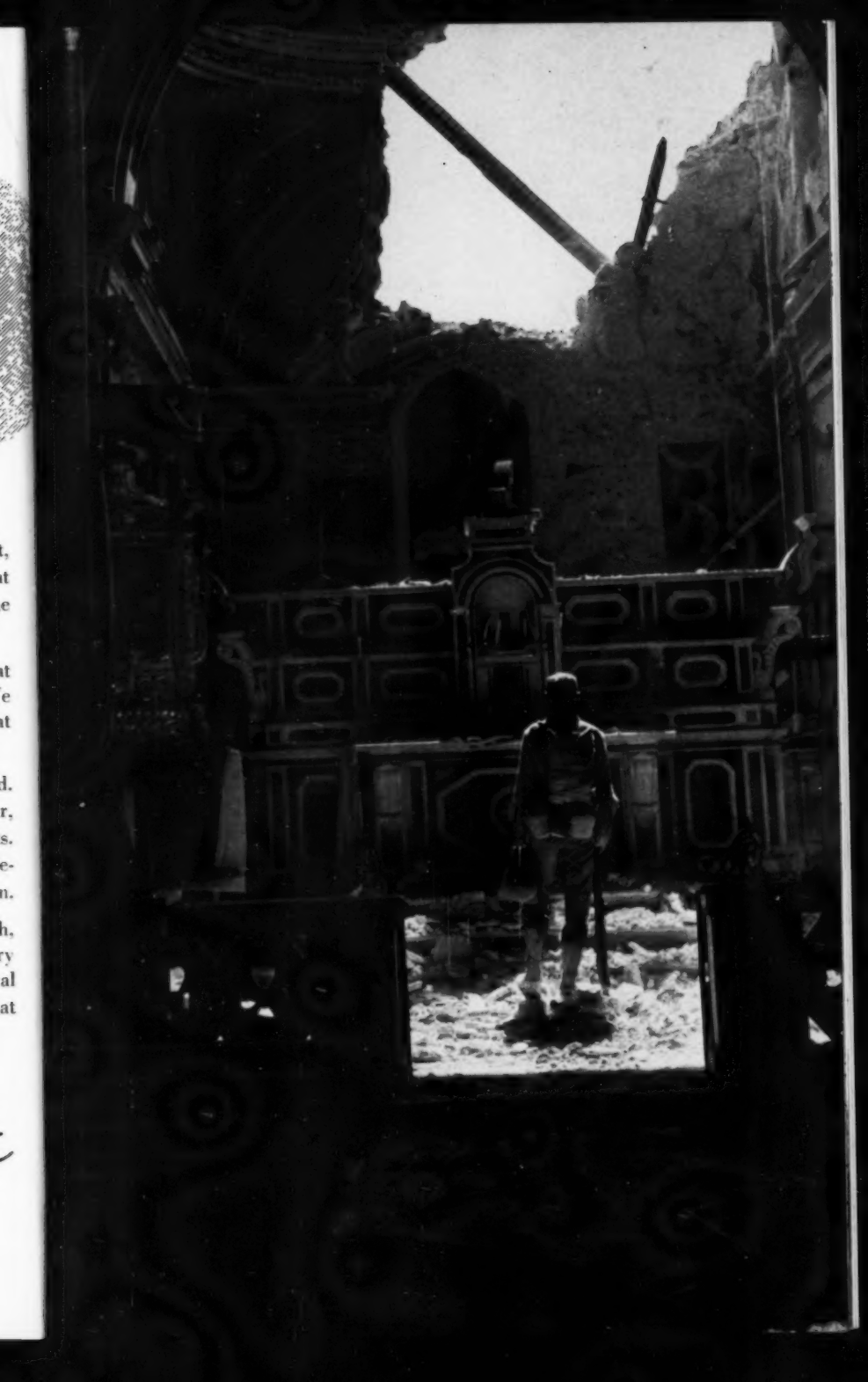
WHETHER the Infantryman shown on the opposite page is a Protestant, Catholic or Jew is of no consequence. The consequential matter is that this picture, taken at Acerno, Italy on 23 September 1943, records a scene that is at once as old as history and as modern as tomorrow.

Some of you may feel this statement is out of place in a magazine that habitually reports items of a purely military nature. We don't think so. We feel this picture serves to remind us that the man who wears a Combat Infantry Badge knows God well—because he needs Him so often.

The scene further reminds us that there are no bigots on the battlefield. Experience has taught us that whenever men depend one upon the other, differences of race and religion vanish . . . and a lasting understanding results. This feeling, we have noticed, reaches across the long miles from battleground to parade ground and becomes a living part of every Infantryman.

While we do not know the name of the young soldier in the photograph, we are, nevertheless, grateful to him. We are glad he jolted our memory by graphically reminding us that Infantrymen are not without a spiritual side. We believe that all men of faith and courage will readily concede that bullets alone never won a battle.

The Editor



INVASION

LT COL ROY E. CREEK

"Flash!"

"Flash, hell—this is Colonel Maloney."

Not quite the prescribed response to a challenge, but one that served to identify a friend in the enemy-infested hedgerows of Normandy early on the morning of 6 June 1944. In order to understand the situation at the hedgerow meeting, it is necessary to discuss events leading up to it.

THE TRAINING

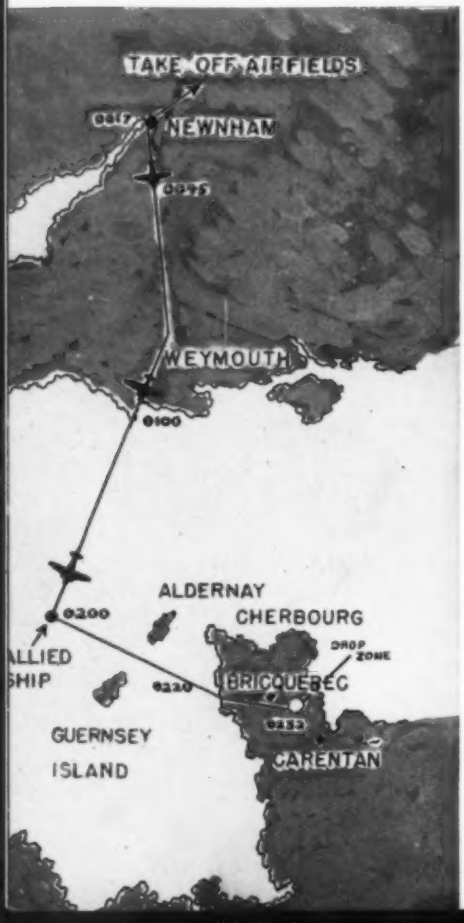
EARLY in December 1943, the 507th Parachute Infantry arrived in North Ireland and was at-

tached to the veteran 82d Airborne Division.

Short, wet days and long, cold nights, coupled with a complete lack of facilities for airborne training, made North Ireland a very undesirable place to prepare for anything resembling an invasion. So, early in February 1944, the division was moved to the English Midlands.

The next several months were devoted to intensive airborne training, consisting of a series of battalion jumps and problems designed to prepare the troops for any eventuality. The training emphasized principles peculiar to airborne units, such as:

(1) Speed and initiation of combat immediately upon landing;
(2) Retention of initiative until mission is accomplished;
(3) Recognition of isolation as a normal battlefield condition;
(4) Readiness of all units to attack or defend in all directions at any time;
(5) Improvisation of weapons and equipment; use of enemy weapons and defenses;
(6) Preparedness to conquer or die.



The battalion jumps were culminated by a division jump based on a hypothetical situation that turned out to be amazingly similar to the "pay off," which was only a few short weeks away . . . and, oddly enough, all of the jumps were made at night.

THE PLANNING

As far back as May 1943, plans for the impending invasion were in the making. Plans called for the use of three airborne divisions. This was necessary because the terrain behind the beaches was traversed by deadly causeways which, if not captured from the rear, could easily be sealed off—making the landing area a death trap to beach assaulters. By seizing these causeways, the airborne troops could contribute to the success of the over-all plan by preventing movement of German reserves into the beach area. Staff planners maintained, however, that airborne forces landing in this area would surely suffer 75-80% casualties.

MISSION OF THE AIRBORNE

On 26 May, closer to D-Day than anyone realized, company commanders were called into the "war room," where they found sand tables and map displays destroyed, with staff

companies assembled in the hangar in 15 minutes."

officers and enlisted assistants laboriously preparing new ones.

What did this mean? The answer was soon apparent . . . The 82d Airborne Division's mission had been changed. A constant study of daily aerial photographs revealed that the Germans had moved a new division (91st Infantry Division) into the general area of St. Sauver Le Vicomte and were busily engaged in constructing passive and active anti-airborne defenses. The passive defenses consisted of "Rommel-spargel"* and an elaborate system of anti-personnel mines and booby traps. The active defenses consisted of prepared gun positions (and concentrations) capable of firing observed fire from Hill 110 to cover the entire area. It looked as though intelligence was working overtime for both sides.

The mission of the 82d Airborne Division was to be: land by parachute and glider before and after dawn of D-Day astride the Merderet River; seize, clear and secure the general area within its zone; capture Ste. Mére Eglise; seize and secure the crossings of the Merderet River at La Fiere and Chef Du Pont and a bridgehead covering them; seize and destroy the crossings of the Douve River at Beuzeville La Bastille and Etienville; protect the northwest flank of VII Corps within the division zone and be prepared to advance west on corps order to the line of the Douve north of its junction with the Prairie Marecageuses.

The 82d Airborne Division planned to accomplish its assigned mission by dividing the division into three forces: Force "A" to be committed before dawn of D-Day and to include the 505th, (See Map P. 11) 507th and

LT COLONEL ROY E. CREEK. Next to personal experience, the best way to understand and "get the feel of" any situation is to study the comments and opinions of one who was there. In this article, Lt Col Creek has us "hook up" for the big drop on Normandy. Col Creek, formerly Operations Officer for the Berlin Command, is presently assigned as Executive Secretary of The Infantry School. Enough said. Read INVASION.

508th Parachute Regiments, plus necessary supporting and control elements; Force "B" to be committed by glider before and after dawn of D-Day and to include the 325th Glider Infantry, the bulk of division artillery and other supporting elements of the division; Force "C" to be committed by sea for a landing between D plus 2 and D plus 7 and to include all elements of the division not air-transportable along with attached tanks and tank-destroyer units.

Preparation was continued in the 507th in a serious but high-spirited way. Individual soldiers were busy taking care of personal and special equipment they desired to take along. Trench knives were made razor sharp, and each man equipped himself with an extra knife of his own choosing.

Finally, the 507th was ready to go. Where? When? These questions were asked many times, but no one below company commanders had been briefed. Was it another practice jump or was it the real thing? After all, this had been done many times before.

Without warning . . . on 29 May, trucks arrived to pick up the equip-

**Spargel* is German for asparagus. "Rommel's asparagus"—named for the German commander in the West. The "asparagus" was nothing more than poles spaced 75 to 100 yards apart on all likely landing zones, making treacherous obstacles for gliders.

AUTHOR'S NOTE: This article deals with the operations of a mixed group from units of the 507th Parachute Infantry (82d Airborne Division) in the invasion of France, 5-7 June 1944.

ment bundles that had been ready for days . . . the camp was sealed and the order came—"Get ready to move." In less than two hours, the unit was on its way to the marshalling areas located at nearby airfields. Upon arrival, the fields were found to be completely fenced in and well guarded. There was no question in anyone's mind now . . . this was it. Excitement ran high and almost everyone was actually anxious to "get the show on the road."

Prior to our arrival, bunks had been set up in hangars that were large enough to accommodate an entire battalion. As soon as the troops were settled, the company commanders were called in and assigned briefing tents complete with prepared sand tables, maps and photographs showing the zone of operation in great detail. Despite the air of expectancy that prevailed, company commanders were told that the briefing of their troops must be thorough, as it was of utmost importance that every man be fully informed about where he was going and what he was to do when he got there. Each man had to know his mission. With thorough briefing, a soldier dropped anywhere but in his own drop zone could proceed intelligently to the nearest division objective and make his presence felt. As an afterthought, instructions stated that if a man could do nothing else, he was to cut lines of communication.

When the orientation and briefing were completed, every man knew the details of his mission better than he had ever known anything before, and there was nothing more to be done but relax and wait.

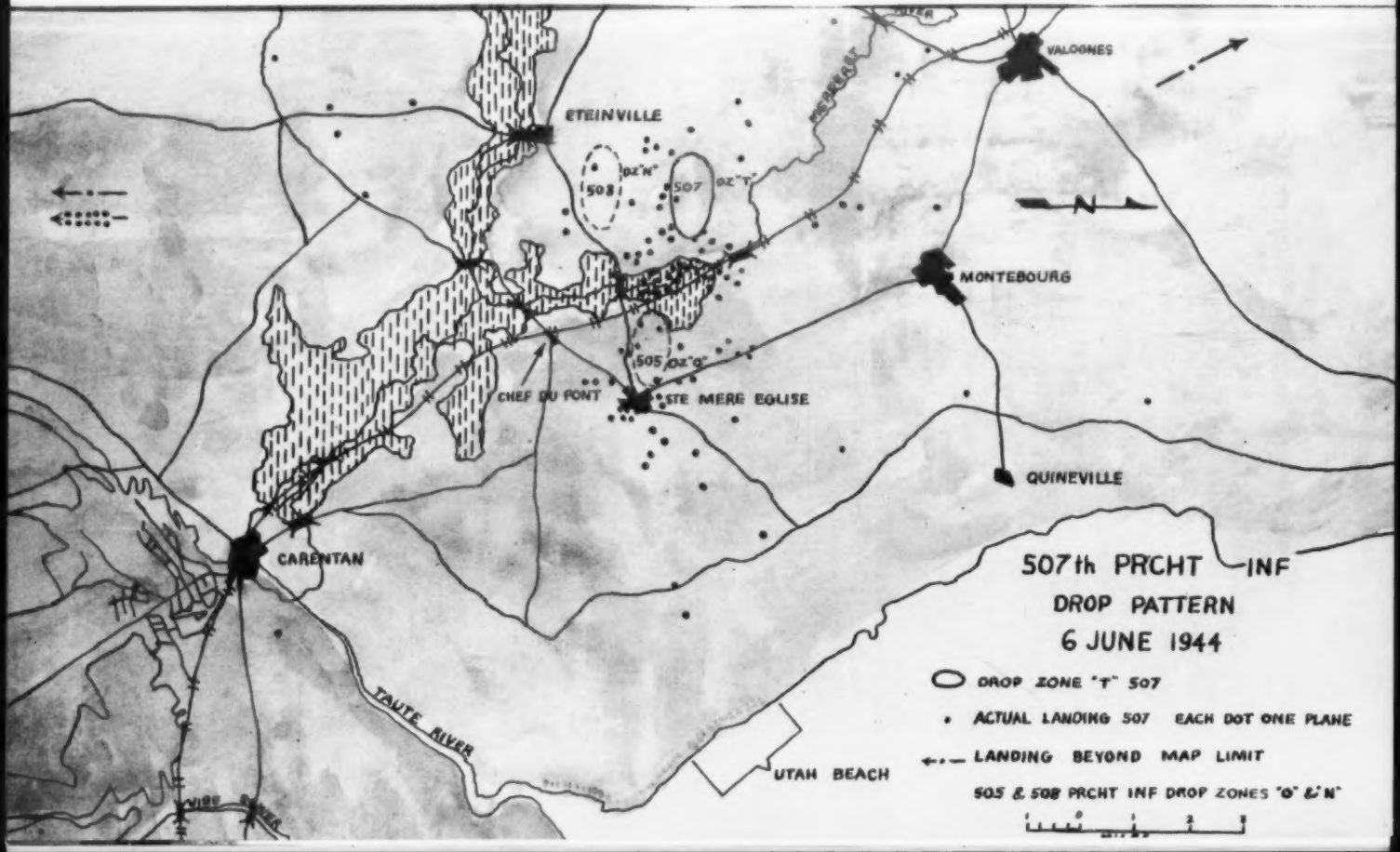
Time passed rapidly . . . and on 5 June, the company commanders were called to the telephone. "Conference call! 'This is Blue 6—have your companies assembled in the hangars in 15 minutes. It is now 1930.' "

In 10 minutes the companies were assembled. Everyone could feel that this was what they had been so anxiously awaiting . . . it was. There were pep talks through channels in reverse — Assistant Division Commander, Regimental Commander and Battalion Commander — but they were short and effective. The Battalion Commander ended his by saying, "Be at your planes as previously assigned at 2300." The first sergeants assembled their respective companies and prepared to secure equipment and move to the planes.

When the companies were formed and everyone was ready to move, the company commanders suddenly realized that this would be the last time all of these men would ever be together and probably said something like, "We have worked long and hard for this moment. Collectively and individually, you are the best fighting men in the world. This time tomorrow we will be on our first objective and will have made our first contribution toward winning the most fearful war the world has ever known. We won't all be there. Some of us will fall along the way. And, as men fall, there will be a doubling of effort for those who stand. God bless you. Ri—ght Face! Fo—ward! March!"

When the companies reached their planes, the men found parachutes and equipment bundles already there. They started loading the bundles and fitting the chutes with a confident spirit that made one glad to be a part of the group. There were 10 to 18 men per plane, making a total of 9 planes per rifle company.

Map A ▸


ETEINVILLE
DZ "N"
508
DZ "T"
507
VALOGNES
MONTEBOURG
505 DZ "O"
CHEF DU PONT
STE MERE EGLISE
QUINEVILLE
CARENTAN
TAUTE RIVER
UTAH BEACH
N
507th PRCHT INF
DROP PATTERN
6 JUNE 1944
DROP ZONE "T" 507
ACTUAL LANDING 507 EACH DOT ONE PLANE
LANDING BEYOND MAP LIMIT
505 & 508 PRCHT INF DROP ZONES "O" & "N"

Down the line came the command, "load up!"

The pilots and crew members of the aircraft had not yet arrived. They arrived at about 2330 and the jumpmasters made final checks and coordination. Details had been previously worked out in a pilot-jumpmaster joint briefing, so last-minute work was probably for reassurance and to relieve nervous tension. The pilots did add assurance that there was nothing to worry about. They would hit the drop zone right on the "button." According to the plan, pilots were to warn the jumpmasters when the flight was 20 minutes from the drop zone so final preparations could be made. Four minutes from the drop zone, the pilot would switch on a red light located on the right side of the exit door. A green light, located at the same place, would be the signal to go.

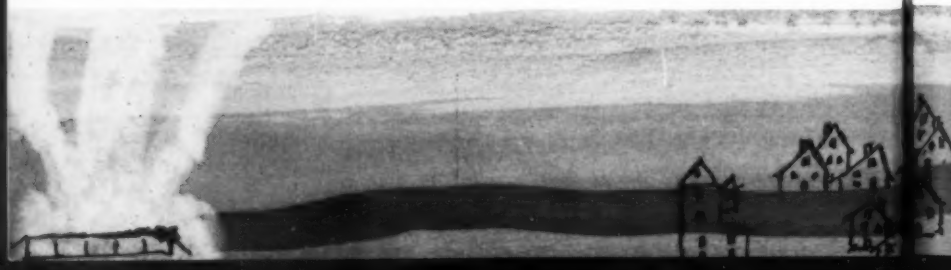
The Pathfinder teams had taken off from a nearby field at 2305 and would be landing to set up a lighted "T," according to plan, at 0156. Little thought was given to the fact that the lighted "T" would never burn and the pathfinders would only alert the Germans to make ready for the arrival of the rest of the division.

THE FLIGHT TO THE DROP ZONE

Down the line came the command, "Load up!" There was a bustle . . . and soon everything was quiet, except for the sound of men settling into their seats for the 2½ hour ride that was to follow. The planes taxied onto the runway, and leading elements of the 507th took off at 0017, 6 June. The planes assembled and flew in formation southwest to Newnham, headed south to Weymouth, then turned southwest again to a position north and west of Guernsey Island, where an allied ship was in position to serve as a checkpoint. The men hardly spoke. Many slept or feigned sleep as the planes turned west about 75 miles from the drop zone. As the formation passed the northern end of Guernsey Island, the pilots notified the jumpmasters that they were 20 minutes out. The jumpmasters waited another 10 minutes, then began to awaken the troops, some of whom were relaxed. Everyone got up, checked his equipment and "shook out the kinks." Without warning, the red light went on . . . four minutes! The west coast of the peninsula could be seen from the doors, which were open, and there was a heavy fog, making visibility poor. South of Bricquebec, some of the planes began to receive anti-aircraft fire. The formations could be seen spreading and breaking to avoid the fire and some of the planes were gaining altitude. The jump was supposed to have been made from 600 feet, but the "button" that the pilots had referred to was getting larger and larger. "Two minutes! Stand up! Hook up! Check equipment! Close up! Are you ready? Green light—let's go!" . . . The invasion was on!

THE NORMANDY INVASION

Suddenly everything was quiet except for some enemy small arms fire peppering away in the distance. It was 0232, 6 June. Jumpmasters checked their "sticks' as they floated down, but the fog was thick and they could not see anyone. Each man checked below to see where he was



there was a bustle . . . and soon everything was quiet.

going to land . . . ah, nice, a beautiful flat meadow. Seconds later he was down—splash! Water! My gosh! The area is flooded!

Those razor-sharp knives saved many lives as parachutes and equipment were cut away, but many others drowned. Planes were flying overhead a short distance away, so the men moved in that same general direction. They had salvaged only weapons and ammunition from the flooded Merderet River, which had been set up as the landing area.*

Through the hedgerows we could hear voices, American voices. **Flash** had been designated for the challenge instead of **halt.** From behind a tree came the challenge, "Flash!" The immediate reply was, "Flash, hell—this is Colonel Maloney." We knew we were among friends.

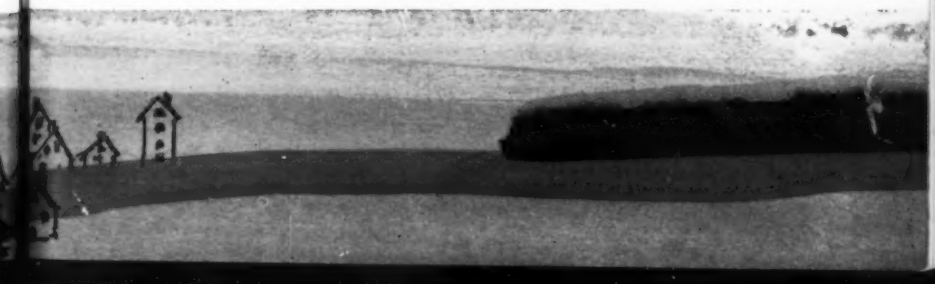
There were about 50 men present. Colonel Maloney assigned the highest ranking officer present the job of organizing a perimeter defense while he tried to contact someone on the only means of communication available, a very wet SCR300 radio. It didn't work.

Troopers kept drifting in and our forces were growing. Men came from all units of the 82d Airborne Division and some from the 101st Airborne Division . . . what a hodgepodge of personnel! Nothing of consequence happened, and soon it was dawn. We knew nothing of what had happened to anyone outside our own small group. There was no tactical unity, no supporting weapons, just a group of invaders who were wondering what had happened to all of their thorough planning.

Just before daybreak, the first gliders began to come in. One landed in a flooded area about 150 yards from where we had our perimeter set up. As the men started to come out of the glider, enemy machine gun fire opened up from the hedgerow on the other side. We hadn't known they were there. Had they been there since our landing, or had they just moved in? Maybe they had located our position and were attacking us when the glider distracted them. Anyway, they were there and men were being hit as they left the glider. Fire was placed on the general vicinity of the machine gun. This enabled a few men to make the hedgerow behind which we had cover.

About 0900, Lt. Colonel Ostberg (Commander, First Battalion, 507th Parachute Infantry) returned from General Gavin's command post and informed us that General Gavin was moving toward La Fiere to the south and that we were to follow. This meant fording the flooded area which we had already struggled through earlier in the day. We pulled out of our position, leaving the wounded marked and as comfortable as possible, and started across the marsh. As we waded in water, sometimes chest deep, we were fired on by snipers, who appeared to be at long ranges because of the inaccuracy of their fire. We made the other side without mishap and marched south until we reached high ground overlooking La Fiere Bridge. When we

*The author of this narrative was among the ones moving to the assembly area, so it will be necessary from this point on, for purposes of clarity, to refer to the group in the first person, inasmuch as there was no tactical unity, no organization.



arrived, General Gavin told us that we should proceed south along the railroad to Chef Du Pont, where we were to seize the town and bridge across the Merderet (west of the center of town). A few men who had been able to get some automatic weapons from some of the bundles dropped as we jumped were attached for this mission and, under the command of Colonel Ostberg, we proceeded down the railroad toward Chef Du Pont. (See Map P. 17.) There were about 100 men and officers altogether, equipped only with what they could carry: rifles, sub-machine guns, three machine guns and grenades of various types, including the British Gammon grenade, which packed a terrific wallop.

THE CHEF DU PONT OPERATION

Time—1000, 6 June. Colonel Ostberg and his force, comprised of men from all units of the 507th and some from the 508th, had reached the railroad station at Chef Du Pont without opposition. The railroad station was in the center of the town and the important bridge was about 1000 yards southwest. A squad was sent to clear the section of town northeast of the station, which they did without incident. The remainder of the force, led by Colonel Ostberg, started a race through the part of town leading to the bridge. This group was fired upon from several buildings simultaneously. Four of the men were hit, and the remainder were forced to hold until the town could be systematically cleared. This took about two hours. By that time, most of the Germans had withdrawn ahead of us, apparently headed for the bridge.

Speed seemed to be the answer. We knew the bridge must be taken before the Germans could organize their defense, so we made a semi-organized dash for it. We were too late! Two officers reached the bridge and were both shot, one toppling off the bridge into the water, the other falling on the eastern approach. The officer toppling into the river was Col. Ostberg. He was rescued shortly afterward by two soldiers of the 507th and lived to fight again. The other officer was dead.

A short time later, Lt. Col. Maloney arrived with about 75 men, and we set about dislodging the stubborn enemy.

To appreciate the difficulties confronting us, an analysis of the terrain and approaches is necessary. The railroad split the town, and the bridge lay to the south and west of the railroad station. Houses lined both sides of the road leading to the bridge. A short distance from the bridge, on the left side of the road, was a large creamery which was quite high and afforded good observation from an upstairs window. South of the creamery, and on three sides of the bridge, there were obstacles (flooded areas). For practical purposes, the only approach to the bridge was the one we had chosen, through Chef Du Pont. The approaches from the west were not approaches in a military sense. They were causeways, long and straight and completely flooded on both sides. No one could hope to attack successfully or withdraw along these causeways without a preponderance

of supporting fires — something we did not have! Nevertheless, we were in the outskirts of Chef Du Pont with 175 men.

"What are we waiting for? Let's take the bridge!"

Two attempts to storm the bridge proved unsuccessful . . . There had to be a better way. We did succeed in clearing the eastern side of the bridge, however, by killing about 24 Germans occupying positions along the shoulders of the road. Positions along the edge of the road east of the bridge had become almost untenable because of rifle and direct artillery fire coming from our right flank.

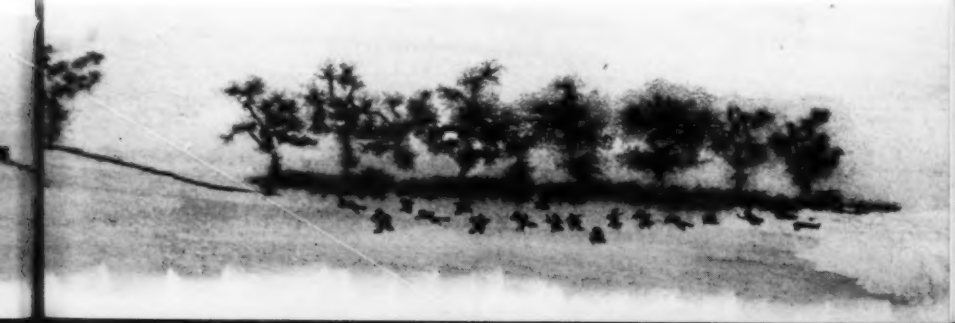
Just as it was beginning to look as though we might have a stalemate, Colonel Maloney was called back to La Fiere with all men available, leaving only about 34 men at Chef Du Pont. Concurrent with his departure, three things happened: (1) direct fire on our positions around the creamery reduced our strength to 20 men; (2) an observation point in the creamery noted a company of Germans moving around our left rear; and (3) an officer delivered a message from General Gavin: "Hold at all costs."

It was pretty obvious that it couldn't cost too much, but at the same time, it was doubtful that we could hold something we didn't have. Reinforcements were requested and, as from heaven, C-47's began to appear, dropping bundles of weapons and ammunition. One bundle of 60mm mortar ammunition dropped right in our laps.

Within 30 minutes, the officer who had previously delivered the "hold at all costs" message returned with 100 men and a 57mm gun which was pulled into position on our side of the bridge. We started firing at the enemy field piece. We didn't hit it, I'm certain, but we stopped its fire and that was our primary desire. Strong positions were organized to our rear and along the flooded area on either side of the road just east of the bridge. Their defenses were tied in with the natural obstacles on three sides of us. We opened fire with every weapon we could get into position, including our 60mm mortar. On a prearranged signal, all fires lifted and 10 men and 1 officer stormed the bridge and went into position on the western approach to guard the causeway. (See Map P. 17.) Five Germans made a run for it down the death-trap causeway, and were immediately shot down. That did it! The battle was over. The bridge was ours and we knew we could hold it, but as with all victories in war, we shared a let-down feeling. We knew it was still a long way to Berlin!

We began to organize and improve our position and tend to such pressing things as first aid of the wounded (25 in number, who could not be evacuated because of lack of any place to evacuate them). We gathered the bodies of the dead (11 Americans and 43 Germans) and covered them with parachutes.

D-Day was almost over and it had gone fast. In a little while it would be D plus 1. When would the beach forces contact us? They should have already done so. Maybe the whole invasion had failed. After all, we



knew nothing of the situation except as it existed in Chef Du Pont, and Chef Du Pont is a very small town. At 2400 hours, our fears were dispelled . . . reconnaissance elements of the 4th Infantry Division wheeled into our creamery yard, complete with rations and everything.

As we made ourselves comfortable for a short sleep, the smell of death, which was to be with us for a long time to come, had begun to permeate the night air.

It was D plus 1 in Normandy.

* * *

In making a study of this invasion and subsequent operations, it is my opinion that the decision to use Airborne Troops in support of the invasion of France was an extremely wise one. There is no doubt that the German forces on the Cotentin Peninsula were confused and disorganized and were not able to resist the beach landings as they otherwise would have been.

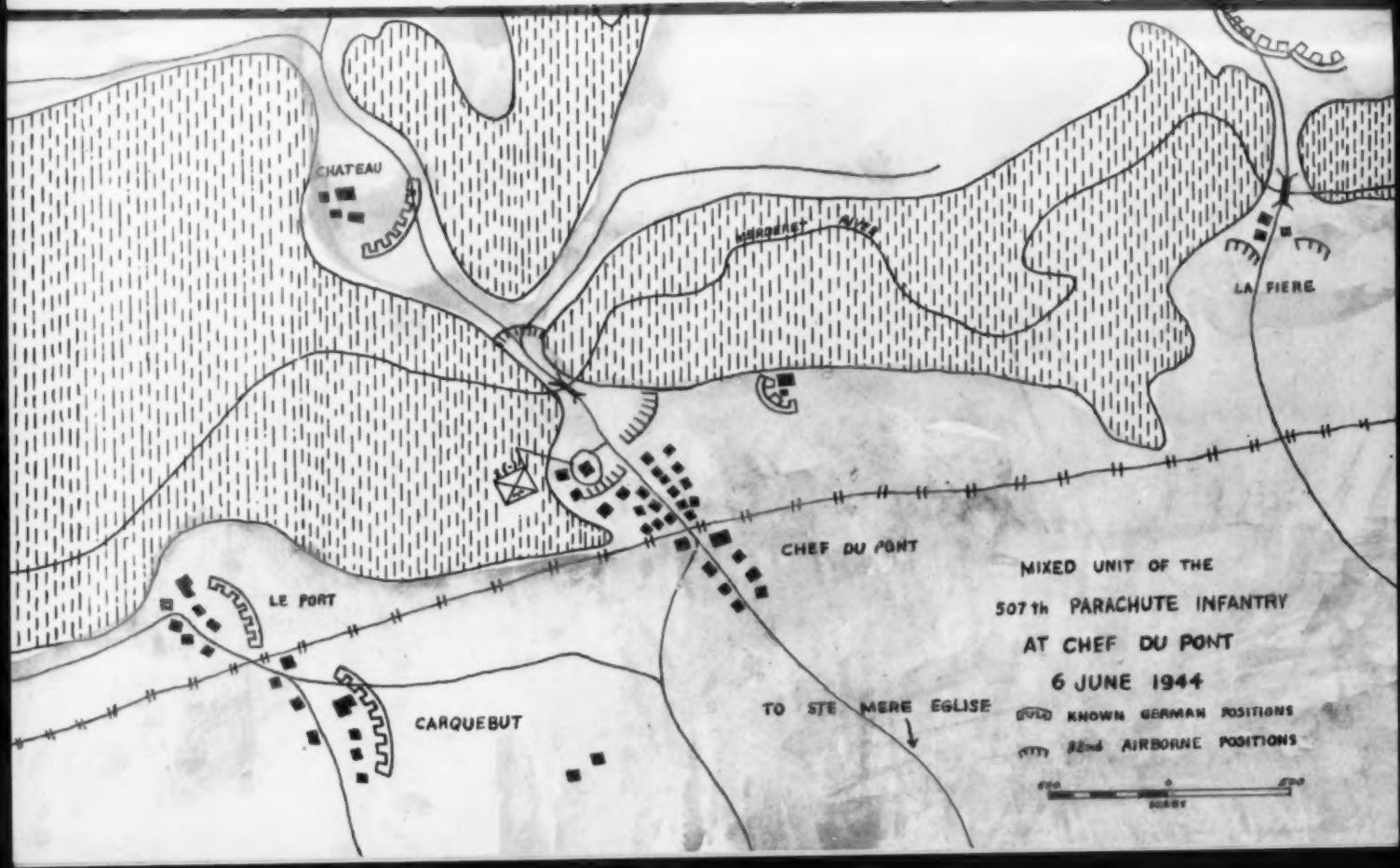
Training and preparation for the invasion was thorough and very effective. It is questionable, however, whether the advantages gained from a night drop outweigh the confusion of our own troops resulting from it. Of course, the situation will dictate the answer—but where there is a superiority of air power favoring the invaders, I believe that a well coordinated day drop, supported by air strikes into the area immediately before and during the drop, will have a better chance of overwhelming success.

Briefing was well planned and the facilities provided were excellent. Security was maintained throughout, contributing materially to the element of surprise, which is so essential to the success of this type of operation. There did, however, seem to be a lack of knowledge concerning the nature of the terrain among small unit commanders. For example, the flooded Merderet River and the hedgerows were not anticipated and, consequently, handicapped initial movement. There was a tremendous amount of equipment and some personnel lost in the flooded waters. It is doubtful that the advantages gained from dropping so near to assigned objectives justified these losses. In many cases, it resulted in a splitting of units and made reorganization more difficult.

Aerial reconnaissance and photography are the best sources of information concerning changes being made in proposed landing areas. A constant study of aerial photographs of the 82d Airborne Division's area resulted in a complete change of plans 10 days prior to the invasion. Of course, no one knows what would have happened had the division dropped on the bristling anti-airborne defenses around St. Sauver Le Vicomte, as originally planned. But such a drop could easily have been disastrous.

The Germans had a sound plan for anti-airborne defense in Normandy and probably would have been more successful against an organized drop. Their plan did not differ greatly from our present doctrine of anti-airborne defense, and they made the same mistakes that we might conceivably make under similar circumstances. Their selection of probable landing areas and objectives was uncanny. Their use of passive

Map B ▸


CHATEAU
LA FIERE
CHEF DU PONT
LE PORT
CARQUEBUT
TO STE MERE EGLISE
MIXED UNIT OF THE
507th PARACHUTE INFANTRY
AT CHEF DU PONT
6 JUNE 1944
KNOWN GERMAN POSITIONS
82nd AIRBORNE POSITIONS

defense measures was relatively successful in that many gliders crashed upon landing. Where their plan fell down, however, was in their inability to determine when to commit their mobile striking forces . . . the crux of the whole anti-airborne defense. The mobile striking force is a reserve. The same principles governing the commitment of any reserve should apply to this force. The invading airborne forces cannot be looked upon as anything but a penetration and should be dealt with accordingly. The Germans whittled down their striking forces in an effort to eliminate scattered resistance. They did not fix the enemy before launching a counterattack. They offset the tremendous advantage they should have gained from the airborne invaders' dispersed drop by dispersing their own forces. In this way, the Germans neutralized their own supporting fires and afforded small groups of determined invaders an opportunity to seize lightly-held key objectives.

A more complete understanding between airborne forces and air force personnel transporting them is essential. The drop zone of the 507th Parachute Infantry should have been 2500 yards in diameter at the widest point. Instead, troops of this regiment were scattered over an area 40 miles in diameter at its widest point. There is no reason why techniques could not be developed to improve this and, in my opinion, such techniques must be developed before organized night parachute drops can be made. The use of pathfinder teams might be the answer but, as demonstrated in this operation, their use probably will mean a loss of the all important element of surprise.

Assembly was difficult but was effectively accomplished (considering the poor drop). It was not carried out according to plan, however, and resulted in groups of men from different units banding together initially. This was somewhat confusing because there was no tactical unity, no organization and no coordination.

There was no attempt by many of the officers commanding these hodgepodge groups to organize them into fighting units. Many officers were foolishly killed or wounded trying to lead squad attacks.

Resupply of airborne troops must be set up immediately to offset equipment lost on the drop. This resupply probably would be made prior to any link-up; therefore, it will have to be made by air. The drops should be planned near unit objectives to compensate for lack of transportation.

Airborne troops must substitute aggressiveness for supporting arms and equipment, and they must use obstacles to the fullest in holding objectives once taken. A well planned, well executed airborne operation cannot be denied success.

Publication of this article should not necessarily be interpreted as reflecting the thought of The Infantry School or The Infantry School Quarterly.—Editor.

•

That general is skillful in attack whose opponent does not know what to defend; and he is skillful in defense whose opponent does not know what to attack.—Sun Tzu.

A better sight

A better aim

A better hit

a panoramic sight for the 81mm mortar

lt. wm. r. richardson

lt. warner s. goodwin, jr.

IN 1952, the 81-mm mortar M29* became standard equipment. Its circular base plate gave it a 360° traverse. One serious hitch, however, was the continued use of the M4 sight. This sight has a maximum reading of 150 mils deflection right or left. The problem: "What to do with a sight that limits the potential of this modern weapon?"

After a series of tests, the answer was found in the M34 sight, a "panoramic sight" which was adopted on 1 June 1954 for use with the 81-mm mortar M29. It will soon replace the M4 now in use.

*See "The New 81mm Mortar," Infantry School Quarterly, January 1953.

At last, here is a mortar sight that does not limi the

What are the advantages of the new sight?

1. The M34 sight enables the gunner to look through the eyepiece in the direction of the aiming point, and obtain a distinct view through a three power telescope.

2. Only two stakes are necessary for accurate laying since the sight enables one to read angles up to 3200 mils. One stake is placed about 100 yards forward of the weapon (if impossible, as far out as may be practicable). The near stake is placed in line with the far stake but at half the latter's distance from the weapon. (See fig. A.)

These stakes can be placed in any direction except the area which is masked by the barrel of the mortar. In a perimeter defense, two additional stakes may be placed in an opposite direction from the first pair —for ease in shifting fires.

3. The gunner can be trained on the same sight used with 4.2-inch mortars.

4. Speed in making sight settings and laying on stakes. A very fine cross hair within the eyepiece enables the gunner to obtain an accurate sight picture quickly. A well trained gunner should be able to discern the aiming stakes instantly.

Provided the FDC computes its data accurately, the M34 sight will unquestionably increase the effectiveness of the 81-mm mortar.

5. With the M4 sight, the platoon was laid parallel by using a compass. With the new sight, the platoon can be laid reciprocally by using an aiming circle (a more accurate method).

6. Accuracy. The sight is graduated every 1 mil for deflection (an advantage over the M4 sight which is graduated every 5 mils).

Calibration—Continuous firing will cause the M34 to lose its calibration.

a. Here's what a qualified individual should do to calibrate the sight for elevation:

(1) Set the mortar on level ground with the traversing bearing centered. Sandbag for stability.

(2) Use a gunner's quadrant to set an elevation of 1100 mils on the mortar barrel.

(3) Center the cross-level bubble of the sight, then center the elevation bubble by turning the elevation knob.

(4) If the reading of the elevation scale of the sight is not the same as the elevation set with the gunner's quadrant (1100 mils) and the reading on the elevation micrometer is not 0, adjust the sight as follows:

(a) Loosen the two screws which hold the elevation scale to the telescope mount and move the scale until the 1100-mil mark on the scale is

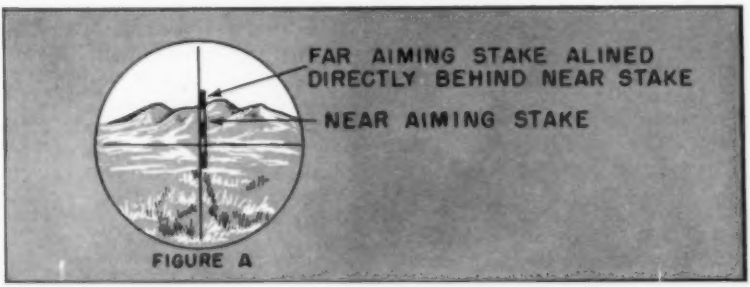


FIGURE A

opposite the index mark. Tighten the two screws.

(b) Loosen the three screws in the end of the elevation knob, but do not turn the knob.

(c) Hold the elevation knob in place and turn the elevation micrometer scale until the 0 is opposite the index mark. Tighten the three screws.

(5) Recheck the readings of the gunner's quadrant and the sight. If the two readings do not correspond, repeat the operations listed above.

b. Here is what a qualified individual should do to calibrate the sight for deflection:

(1) Set the M1 Aiming Circle about 25 feet in rear of the mortar and level the head. Orient the instrument with the 0-3200 mil line pointing to the center of the base plug.

(2) Depress the mortar barrel to its lowest position. Traverse the mortar barrel until the vertical line of the telescope reticle of the aiming circle is alined along the center axis of the barrel from the base plug to the muzzle. Center the cross-level bubble.

(3) Turn the deflection knob until the vertical cross hair of the sight is on the center of the aiming circle lens and read the angle.

(4) Turn the azimuth knob of the aiming circle until the vertical cross hair of the telescope is laid on the center of the sight lens and read the angle. The two angles should be the same. If they are not and the difference between the angles is 100 mils or greater, adjust the sight as follows:

(a) Loosen the four flat-head screws above the deflection scale. Next, move the deflection scale until the closest even 100 mil mark to the 100 mil reading of the angle measured by the aiming circle is opposite the index mark. Tighten the four flat-head screws.

(b) Hold the deflection knob in place and loosen the retaining nut. Keep the deflection knob in place and move the micrometer scale until it shows the same angle measured by the aiming circle (to the nearest 1 mil). Tighten the retaining nut.

(c) Look through the sight to determine whether the vertical line of the reticle is still on the center of the aiming circle telescope lens. If it has moved, repeat the steps outlined in (2) above.

If the difference between the measured angles is less than 100 units, omit step (1) above.

Improvements. An improved model of the M34 sight is being developed at the present time. This model, the M34A2, will bring the cross-level bubble down to the same plane as the elevation bubble. This will make it possible for the gunner to look through the eyepiece and glance at the bubble without having to move his head. The test model has the advantage of a slipping scale which permits the deflection scale to be in

---

TWO experts zero in with a panoramic coverage of the panoramic sight. LT WILLIAM R. RICHARDSON, a 1951 graduate of the U.S. Military Academy and veteran of eight months in Korea is now an instructor in the Weapons Department, The Infantry School. Co-author, LT WARNER S. GOODWIN, JR., served in the Marine Corps from 1943-1946. He received his ROTC commission from North Carolina State College in 1951 and served in Korea as a heavy mortar company officer. He too, is an instructor in the Weapons Department.

any position. This means the aiming stakes could be placed with any desired referred deflection, and in any direction from the mortar itself. It would, in turn, make it possible for each mortar crew to place its stakes out in any direction, while the entire platoon retained the same referred deflection.

Plotting Board. Work is currently in progress on a new larger plotting board for use by the FDC. The present M10 Plotting Board will, however, work with both the M34 and the M4 sight.

For example: The computer rotates the board to the azimuth on which the mortars are mounted. He will write under the azimuth—the referred deflection on which the aiming stakes are placed. If the platoon used 0 as its referred deflection, 0 is entered under the azimuth.

The sight scale is numbered every 100 mils below the azimuth scale, increasing in a counterclockwise direction from 0 to 32. The mortars are not required to use a referred deflection of 0. Each platoon may have its own preference. A referred deflection of 2800 mils is often used with the present M34 sight when aiming stakes are placed out to the front. This gives the gunner a wider sector of vision when shifting to fire to the left.

Firing Tables. Present firing tables found in 81-mm ammunition boxes provide for elevation in degrees; however, some ammunition is now being boxed with firing tables in degrees and mils. Degrees can be converted to mils for the M34 sight. There is still a need for both types of tables until all units receive the M34 sight unit. A Graphical Firing Table (GFT) similar to those now used with the 4.2-inch mortar has been tried with the 81-mm mortar. It proved successful but, because of the many types of ammunition presently authorized for this mortar, a GFT would have to be issued for each type.

At present the army has enough M34 sights to supply all units. The adoption of the sight is not expected to revolutionize mortar firing, but it will greatly enhance the over-all performance of the 81-mm mortar.

• •

A R E

Y O U

A

N O M A D ?

Next time you fold your tents, don't steal away silently! Let us know your new oasis, so your Quarterly will reach you without delay!

ANSWER the following questions to determine whether you are a bolo, recruit, marksman, sharpshooter or expert. Each question worth 10 pts.

1. The training hand grenade has:
   (1) A black powder filler.
   (2) A TNT filler.
   (3) A composition "B" filler.
   (4) No filler.

2. What are the five steps an instructor takes in planning a lesson?

3. When selecting a site for the regimental airstrip, primary consideration is given to:
   a. Condition and composition of the soil, prevailing winds, and cover and concealment.
   b. Engineer requirements, close proximity to field maintenance facilities and drainage and slope.
   c. Terrain which lends itself to defense against ground and air attack, and location with reference to the regimental CP.
   d. Air density, proximity to field maintenance facilities, engineer requirements and defilade from enemy observation.

4. What are the three methods of attack for tanks and Infantry?

5. The "Polly Smith" is:
   (1) A probe with steel point and hollow aluminum handle.
   (2) A bounding anti-personnel mine.
   (3) An electric mine detector.
   (4) An anti-lift device.

6. The counterfire platoon leader is responsible to the Hq & Hq Co for the discipline, welfare and training of the counterfire platoon; in addition he is what special regimental staff officer?

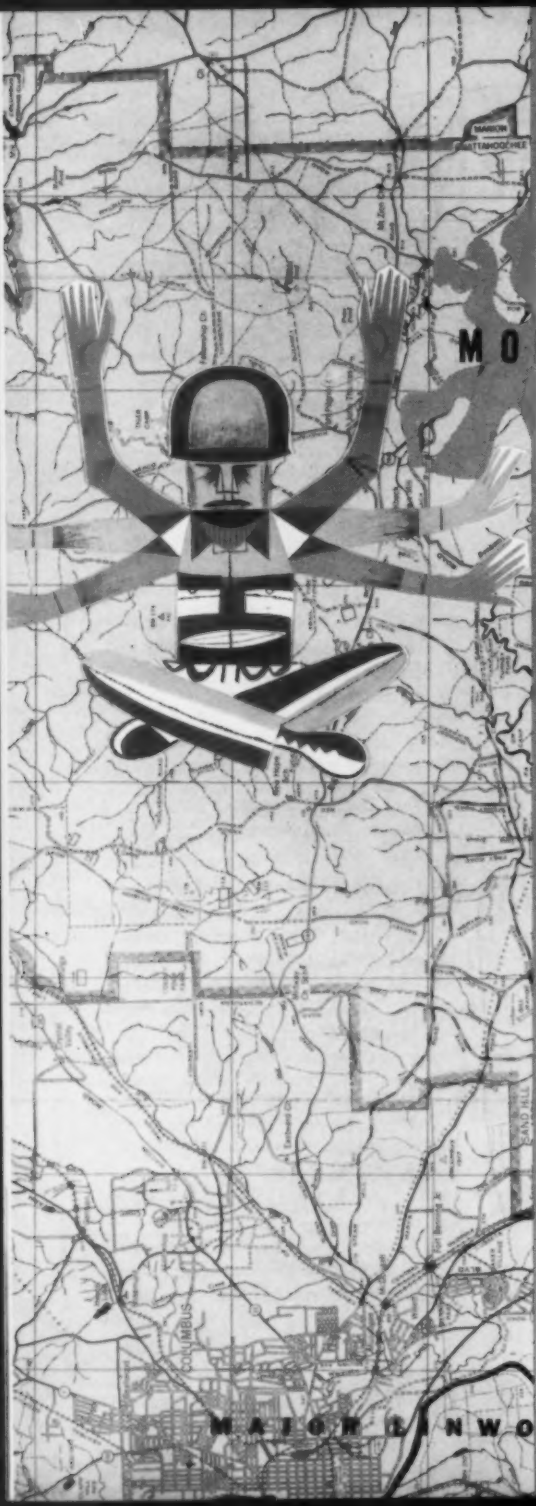
7. The maximum range of the 105-mm recoilless rifle using the direct fire sight is:
   (1) 2100 yards.
   (2) 9300 yards.
   (3) 2700 yards.
   (4) 8400 yards.

8. What is the purpose of The Preventive Maintenance Roster, DA Form 460?

9. If the grid declination on a map is 3° East and the magnetic declination is 2° West, what is the GM Angle?
   a. 5° East.
   b. 5° West.
   c. 1° East.
   d. 1° West.

10. What abbreviations are authorized to be used in posting the duty roster to indicate personnel not available for detail?

Turn to page 112 to see how you rate. Look for another **Quarterly** Quiz in the next issue.



MOBILE DEFENSE

MAJOR LINWOOD A. CARLETON

IN THIS day of atomic bombs, extended fronts and enemies who employ mass—the Infantryman needs wings on his heels . . . winged heels, like those of the Greek God Mercury . . . in order to strike where he is least expected.

Scores of readers have asked how we intend to apply this mobile concept to defense. It would be almost impossible to reply to each query individually, so we cornered the perceptive Major Carlton and peppered him with the questions most often asked. The result is the interview which follows—starting, logically, with a definition of mobile defense.—Editor.

MOBILE DEFENSE—WHAT IS IT?

Q. Would you define the term **mobile defense?**

A. It's a form of defense in which forward defensive positions are occupied by the minimum forces needed to do two things: (1) canalize the attacking forces into less favorable terrain; (2) block or impede the attacking forces while the bulk of the force is employed in offensive action to destroy the enemy at the time and place most favorable to the defender. If you examine figure A you will see a schematic version of **mobile defense.** You will note that, generally, the defensive positions (strong points) are not mutually supporting.

EMPLOYMENT OF MOBILE DEFENSE

Q. Under what conditions can we expect to use **mobile defense?**

A. Whenever the front to be defended is of too great a size to effectively employ position defense—and when sufficient depth exists within the battle position to permit us to canalize enemy forces and maneuver our own reserves.

NECESSITY FOR MOBILE DEFENSE

Q. Many readers have asked why **mobile defense** is necessary. Will you answer this for us?

A. In order to give proper insight to this question we must glance toward the future. In doing so, we find that any analysis of future warfare is predicated on two points. Very briefly, they are: (1) the United States and its allies will enter any future war on the defensive; (2) a position-type defense line across Europe, for example, would be almost impossible because of the tremendous number of troops required for such an undertaking.

Q. Almost impossible? Would you expand on this line of thought?

A. Well—let me add that sufficient troops are not presently available for an undertaking such as I have just mentioned and wouldn't be available in the future . . . certainly not in the initial stages. We must remember that fronts must be defended by available manpower.

Q. What effect does an enemy's known atomic and CBR capability have on the matter?

A. Here's a new factor in warfare. The threat of the enemy's use of his atomic or CBR capability will probably limit the desirability of using position-type defense. Certainly this is true for a unit the size of an Infantry division. The reason is rather obvious, since a single atomic burst could destroy a large percentage of a division disposed in a tight-knit position-type defense.

Q. What about the use of atomic and CBR weapons by the United States on enemy troop concentrations?

A. In such a case, we should have the means available to exploit and follow up quickly. To do this—we should have mobile, semi-independent, hard-hitting forces that can move rapidly through the areas which have been neutralized by atomic strikes or CBR munitions. I feel that offensive action, whether on a large or small scale, would, in such a case, be best employed from a defensive position organized along mobile defense lines. In other words, a mobile defense is an excellent means of providing a springboard for an offense.

MOBILE DEFENSE DIFFERS FROM POSITION DEFENSE

Q. From our conversation thus far, it seems rather obvious that **mobile defense** differs considerably from position defense. Could you spell out this difference?

A. Certainly. If we examine **position defense,** we find that the defender's forces are disposed in the forward part of the battle position. Here he holds a defined main line of resistance. We rely on the ability of the defender to hold this position and control the terrain between the defended areas.

In **position defense,** we plan on stopping or repelling the enemy in front of the main line of resistance. Should he enter the battle position, we plan to destroy him by counterattack to restore the main line of resistance.

Q. You've outlined position defense. Now what about **mobile defense?**

A. A glance at figure A shows that (in mobile defense) there is no main line of resistance. Note that the minimum forces required are disposed in **strong points** within the forward areas of the battle position. The bulk of the defender's forces are in **strong points**

or **assembly areas** in the **mobile reserve area.**

As I said earlier, these forward area strong points, together with fire and barriers, canalize the attacker into areas of the defender's choice. The **mobile reserve** is employed to destroy the enemy by **firepower, maneuver** and **shock action.**

ESSENTIALS OF MOBILE DEFENSE

Q. Using figure A as our guide, will you give us the specifics on the component parts of **mobile defense?**

A. Let's first consider **security.** We still want security forces forward of the battle position. We need aviation, corps covering force, a general outpost and observation posts.

The main point is that greater emphasis is placed on mobility—the missions of these forces remain the same. If they can be sufficiently motorized, however, canalizing the attacker should begin with these security forces.

Q. You didn't mention the combat outpost—has it been eliminated?

A. Let's put it this way. In mobile defense the combat outpost is replaced by a series of **observation posts** in front of the forward area strong points. The frontage covered in **mobile defense** prevents having a combat outpost (a line of outguards as we now know them). However, the mission of these OP's is the same as the combat outpost except that you cannot expect them to delay the enemy as long.

Q. What about the **battle position?**

A. In **mobile defense** it is composed of a forward area and a mobile reserve area.

Q. Would you explain each of these in detail?

A. Surely, let's look at the **forward area.** We find that it is composed of reinforced battalion or, larger size strong points. These strong points occupy prepared positions on terrain dominating the enemy's avenues of approach.

The main job of these strong points is to canalize and concen-

---

MAJ LINWOOD A. CARLTON. With keen foresight, this author discusses a very important phase of future warfare . . . one in which every Infantryman should be intensely interested.

Major Carleton is a 1942 OCS graduate, has attended the Advanced Course at The Infantry School and played an active role in five campaigns with the 1st Army in Europe during WW II. He is currently attending the Air University.

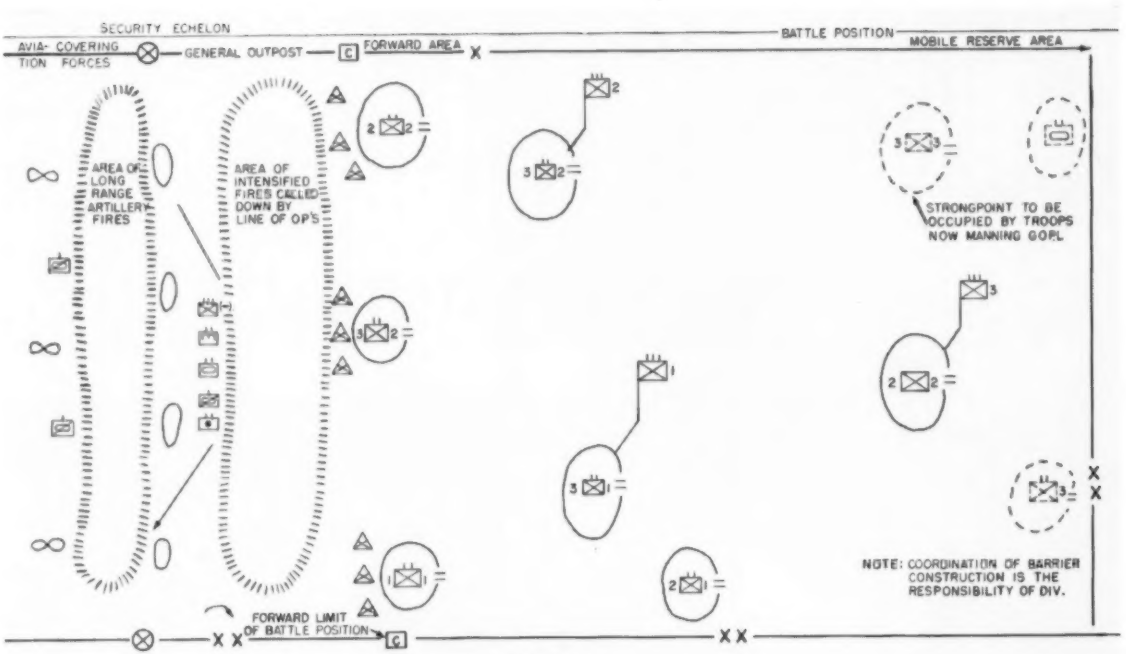


FIGURE A
DISPOSITION OF TROOPS IN A MOBILE DEFENSE
(SCHEMATIC)

trate the enemy's forces into an area where they can be destroyed.

Q. What should we know about the **mobile reserve area?**

A. It consists of reinforced battalion-size (or larger) strong points in deployed defensive positions which are known as the mobile reserve.

Q. What is the mission of the mobile reserve?

A. The primary mission is to attack and destroy enemy forces previously canalized by the strong points in the forward area. Since any part of the battle position may be called to canalize the attacker's forces, the strong points are initially placed in prepared positions similar to those in the forward area.

The reserve can be used on offensive missions in front of, within, or behind the forward area. Like any other reserve, it should be employed at the time and place that will best insure destruction of the enemy. It would be employed ideally — if used following an atomic strike against a canalized enemy.

Q. What, **precisely**, is meant by the term **strong point?**

A. It's a defensive area in a **mobile defense** system that can be occupied by a company, battalion or regiment. We feel that a battalion is the smallest unit that should be assigned a strong point mission. Anything smaller than a battalion usually lacks the combat power to effectively defend long enough to canalize the enemy and consequently—time wise —permit effective counteraction by the mobile reserve. These strong points normally are not mutually supporting.

Q. Does **mobile defense** give maximum flexibility?

A. It does more; it gives **increased** flexibility. It permits the defender to hold any combination of strong points he elects or, if necessary, to give ground (in certain areas) if the latter is more suitable to **his** plan of action.

Q. What happens when a strong point is bypassed?

A. Since strong points are not mutually supporting, each must be prepared to continue resistance on its own. The strong point, often referred to as a modified perimeter defense (since its organization is similar), can defend from more than one direction simultaneously and can revert to a perimeter defense with a minimum of movement.

ITEMS THAT ARE EMPHASIZED

Q. What specific things related to **mobile defense** require special emphasis?

A. There are a number of them—such as: surveillance; counterattack barriers; artillery; control; supply; atomic capability; and the employment of organic units.

Let's examine each of these separately—starting with **surveillance.**

Surveillance (See figure B.)

One of the most critical elements in the conduct of **mobile defense** is the plan of surveillance for the areas between strong points. (Keep in mind that strong points are not mutually supporting.) All conceivable means of reconnaissance and detection are used.

You'll notice that the surveillance boundaries are used to control **only** surveillance. (Note key

to new symbols used on figure B.) Each strong point is assigned a specific area which becomes its responsibility for the plan of surveillance.

Q. What about the area not within the boundaries of surveillance?

A. These are controlled as directed by the "overall" defense commander. Because of the distance that will often be involved, armored cavalry units are uniquely suited to accomplish this task.

Q. What is used to augment armored cavalry?

A. Part of this plan of surveillance is carried out by observation posts, patrols, outguards and detached posts. It is necessary that these forces return to their respective strong points before being cut off.

Q. If additional forces are available to strong points, what (if any) effect would it have on the area of surveillance?

A. If an I&R Platoon, for example, is made available—the area of surveillance responsibility can be increased. It's well to remember that forward area strong points are completely encompassed by such surveillance forces as armored cavalry, reconnaissance planes, necessary barriers and electronic detection devices. Of particular value is the use of army aviation in a cavalry or information-seeking role.

Counterattack

Q. Now let's move on to a consideration of the **counterattack.**

A. Here we find the **mobile reserve** is used to attack and destroy the enemy. It is well for us to remember that in mobile defense, as in any other form of defense, any force (in this case — strong points) is expected to do everything possible to maintain the integrity of its position, to include a local counterattack using forces available.

While it's true that the mobile reserve is prepared to assist any threatened strong point, destruction of the canalized enemy is of first importance.

Note figure A. Look at the organization of the counterattack force (mobile reserve). It's composed of the major portion of two regiments. The point I am trying to make is that a regimental commander must (in **mobile defense**) be prepared by assume command of any combination of units at any time.

Barriers

Q. As you have indicated, **barriers** play an important role in the conduct of mobile defense. Would you elaborate on this point?

A. **Barriers** are **important.** Fire power alone is not sufficient to canalize our attacker. We must remember, however, that a barrier system (to be effective) must also be functional. We must **deny** the enemy certain approaches and terrain or at least **delay** him. We must not, however, restrict the maneuver of the defender.

Q. Doesn't the width of the front prohibit complete barrier coverage?

A. Certainly, frontage will often prevent complete barrier coverage. Gaps and lanes must be covered by fire and, in most cases, it will be indirect fire. And don't overlook the use and value of close-support tactical air.

Q. What, if any, priority exists in setting up a barrier system?

A. First priority goes naturally to

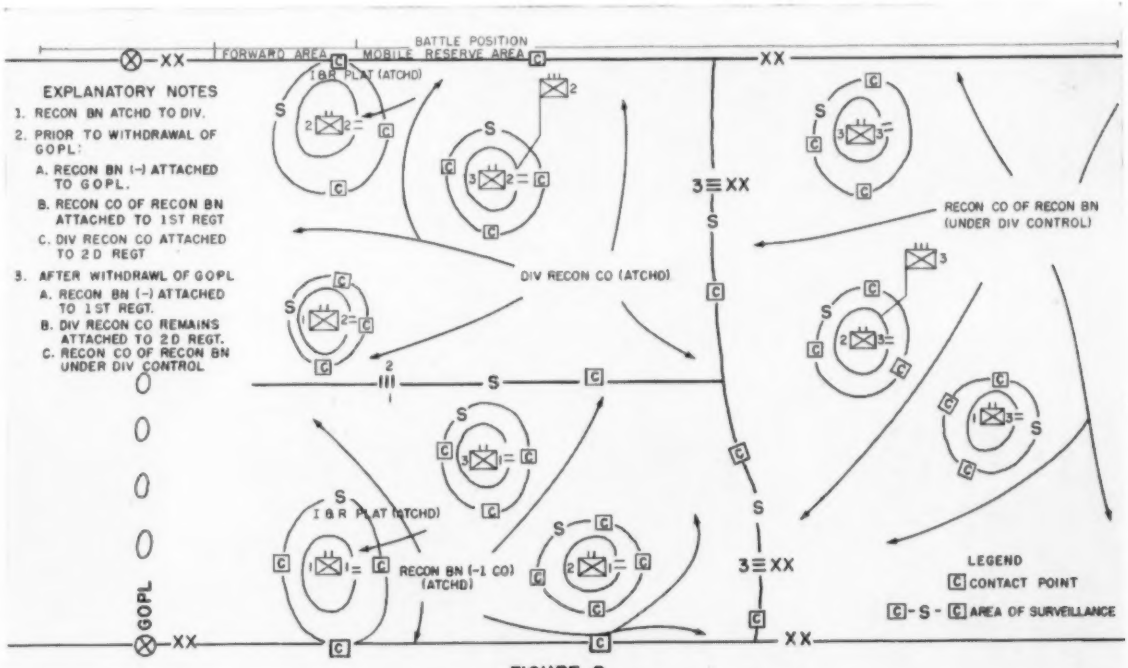
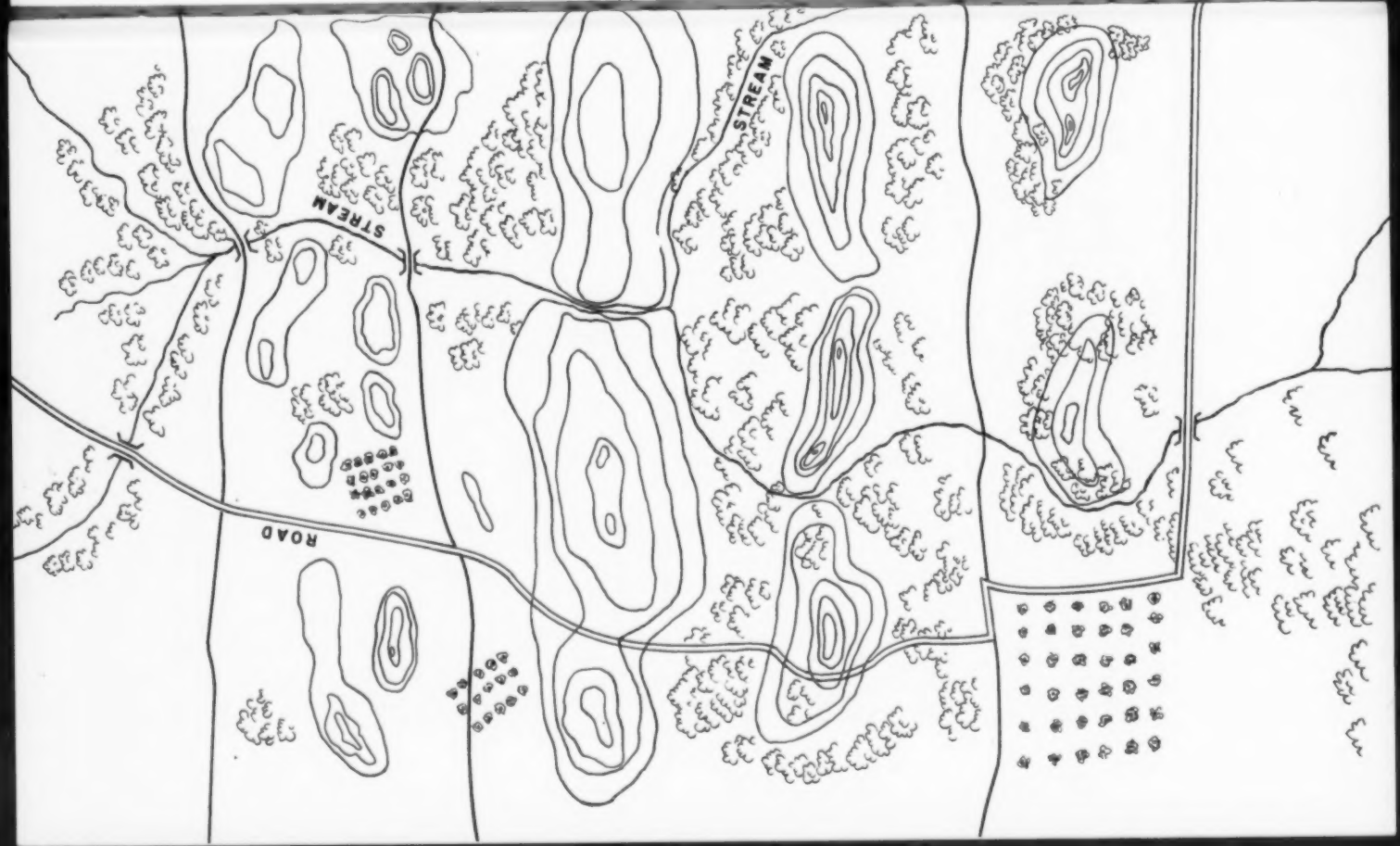

BATTLE POSITION
FORWARD AREA
MOBILE RESERVE AREA
XX
EXPLANATORY NOTES
1. RECON BN ATCHD TO DIV.
2. PRIOR TO WITHDRAWAL OF GOPL:
A. RECON BN (-) ATTACHED TO GOPL.
B. RECON CO OF RECON BN ATTACHED TO 1ST REGT
C. DIV RECON CO ATTACHED TO 2D REGT
3. AFTER WITHDRAWL OF GOPL
A. RECON BN (-) ATTACHED TO 1ST REGT.
B. DIV RECON CO REMAINS ATTACHED TO 2D REGT.
C. RECON CO OF RECON BN UNDER DIV CONTROL
I & R PLAT (ATCHD)
DIV RECON CO (ATCHD)
RECON CO OF RECON BN (UNDER DIV CONTROL)
3≡XX
RECON BN (-1 CO) (ATCHD)
GOPL
LEGEND
C CONTACT POINT
C - S - C AREA OF SURVEILLANCE

FIGURE B

PLAN OF SURVEILLANCE (A TYPE SOLUTION)


STREAM
STREAM
ROAD

the forward areas. If time and supply permit, the system would be extended throughout the depth of the position.

Artillery

Q. Artillery would seem to be a critical item in **mobile defense.** Is this true?

A. It is! Unlike position defense, in **mobile defense** we have wide intervals between strong points. This creates a problem that can be solved in part by artillery. Artillery must be so distributed that it can cover these intervals.

On the other hand, artillery must be protected against infiltrators who might use these intervals to gain access to its positions.

Q. How will the artillery accomplish its mission and remain reasonably protected?

A. It must place its battalions either within or adjacent to the strong points. This affords the required protection. Medium and heavy artillery employed in depth will insure that these intervals are adequately covered.

Control

Q. Won't control of units be more difficult than we have experienced in the past?

A. There is no doubt about it, control will present a problem. Regimental Headquarters will have to be prepared at all times to command a combination of units (combat) within the division.

Supply

Q. What about the matter of supply in a **mobile defense?**

A. Well—during the organization of positions, commanders should plan to have 2 to 3 days of supply by type, on each position. Since the possibility exists that road nets serving the strong points may be denied during an actual operation, plans must be made to include resupply and evacuation of wounded by aerial means.

Atomic Capability

Q. Let us assume that the enemy can be credited with an atomic capability. What measures must be taken to offset this capability?

A. The real answer to this question is found in the concept of **mobile defense itself:** It is a defense which relies on maximum dispersion and maximum deception. A division, for example, properly deployed in **mobile defense** and with an adequate number of dummy positions, presents a far less remunerative atomic target than the same division in position defense.

Q. How about your mobile reserve?

A. In addition to the feature I've just mentioned, the bulk of the troops (mobile reserve) are dispersed and dug-in as strongpoints. Dispersion makes the troops less remunerative targets and digging-in affords them additional protection.

Q. How would we use our atomic capability against the enemy?

A. Atomic weapons of different yields should be used wherever possible against an enemy massed for attack. They also offer the potent fire support needed to neutralize an enemy penetration between strong points. As an added thought along this line, we should remember that using the mobile reserve as an exploitation force

♦ **Fig. C: How do we apply mobile defense to this terrain? For a suggested solution see page 35.**

following our use of atomic weapons should be particularly effective.

Employment of Organic Units

Q. **Mobile defense** will undoubtedly call for some special attention to the employment of our organic units. Will you give us some idea of their use?

A. Certainly, but let me repeat that a minimum of one battalion is distributed to each strong point. The platoons of the Heavy Mortar Company should be attached to battalion strong points in the forward area.

Q. What disposition should be made of the Tank Company and the I&R Platoon?

A. The Tank Company platoons should be attached to the strong points as required.

The I&R Platoon is a natural for a surveillance mission. The platoon may be retained under regimental control or attached to a strong point within the forward area. When retained under regimental control, the platoon will reconnoiter that portion of the overall surveillance of the regiment which has not been charged to a subordinate commander. When attached to a strong point, the platoon will be used in the strong point plan of surveillance.

Q. How will the antitank mine platoon, security platoon and counterfire platoon be employed?

A. The AT mine platoon should be used as an aid in implementing the barrier plan.

It is anticipated that the security platoon will retain its present mission of providing security for the command post. This mission should not prevent its use in the line or as part of a counterattacking force—if necessary.

One squad of the counterfire platoon should be attached to each strong point. Whenever employed in this manner, wire will be laid directly from the attached squad to the battalion fire support coordination center.

Q. How can we expect to use our observation aircraft?

A. Aircraft will be used for surveillance and observation. Helicopters should be used to provide mobility for tactical units and to insure adequate resupply and evacuation.

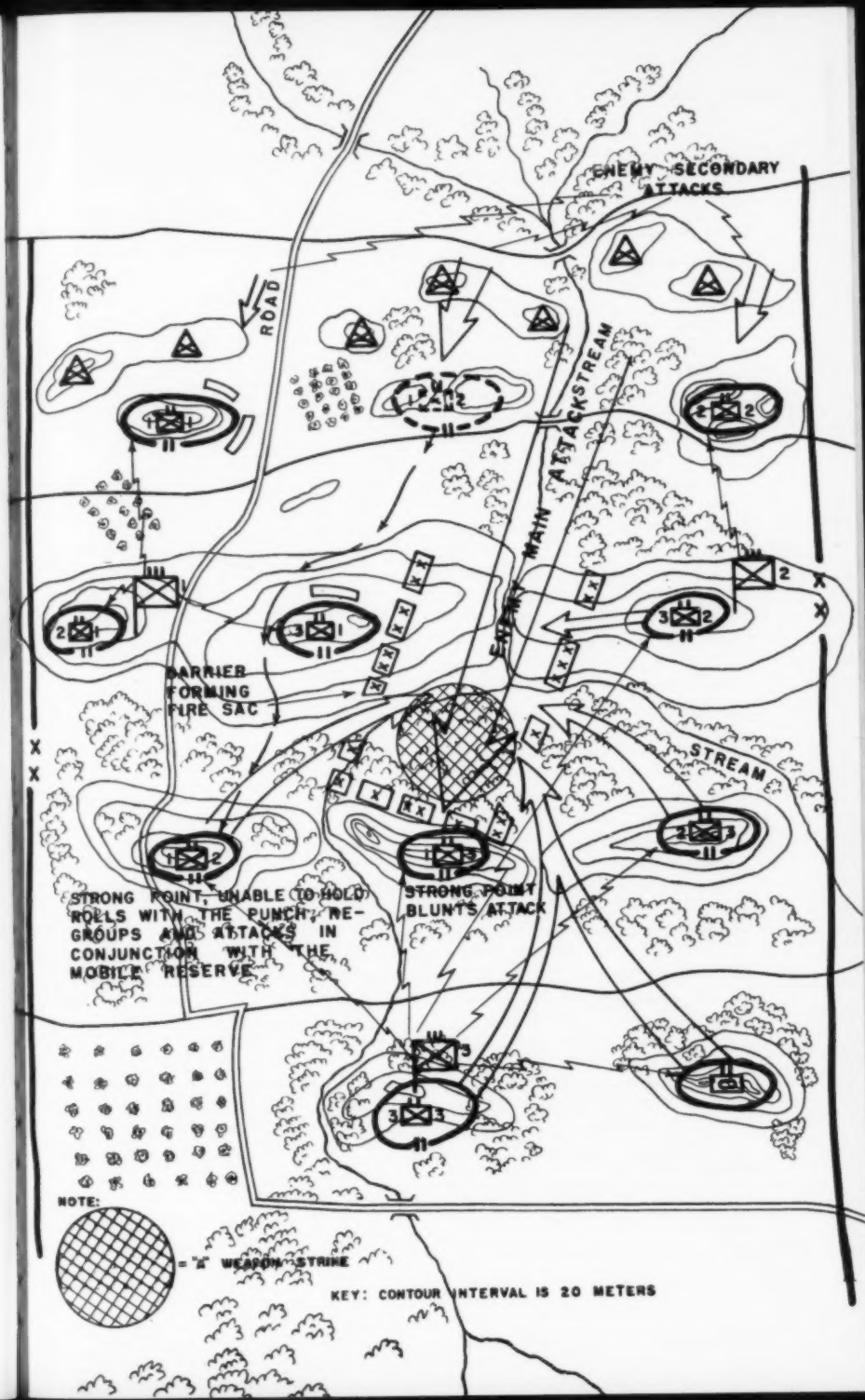
Mobile Defense in Action

Q. So far, we have discussed, largely, the theory of **mobile defense.** Suppose we take a typical piece of terrain (figure C) and assume that we must establish a **mobile defense** on it. Could you show us how you might do this?

A. I think so, but first make the assumption that I am a division commander. Now examine figure D. Here we have a typical **mobile defense.** Note that my forward strong points are organized on terrain that dominates approaches into my area. From these positions, my forward forces can stop the enemy if he attacks the strong points. Should the enemy elect to bypass—you'll notice that he walks into a trap of my making. He has been canalized.

My mobile reserve area, you see, is composed of a series of strong points placed laterally as well as in depth. The forces manning these strong points can

Fig D: Suggested Solution to problem on page 32.


ENEMY SECONDARY ATTACKS
ROAD
ENEMY MAIN ATTACKSTREAM
BARRIER FORMING FIRE SAC
STREAM
STRONG POINT, UNABLE TO HOLD ROLLS WITH THE PUNCH, RE-GROUPS AND ATTACKS IN CONJUNCTION WITH THE MOBILE RESERVE
STRONG POINT BLUNTS ATTACK
NOTE:
= "A" WEAPON STRIKE
KEY: CONTOUR INTERVAL IS 20 METERS

block the enemy, continue to canalize his movement or counter-attack.

Soviet Mobile Defense

Q. Does the USSR have a form of mobile defense?

A. Yes. Theirs corresponds roughly to the US Army's delaying action. They use their form of mobile defense only when their forces are too weak to successfully conduct a position defense.

The mission of the USSR's form of mobile defense is to cause the enemy to lose time by forcing him to deploy prematurely and by inflicting maximum casualties.

Q. Could you give us a slightly more detailed description?

A. I believe so—the Soviet theory is that the enemy must be prevented from engaging in protracted combat along the defense line. When the enemy pressure becomes too great (or, at a previously determined time) the Soviet forces will withdraw to a previously prepared defense line. This defense line is far enough rearward to force the enemy to displace his artillery forward before launching an attack on the new line. This procedure is continued on successive defense lines as long as they have a **mobile defense** mission.

Actual Use of Mobile Defense by U.S.

Q. Has the US Army ever used **mobile defense** in combat?

A. Not as I have described it. The defense established by X Corps in the eastern portion of Korea (early 1951), however, used many of the fundamentals of **mobile defense.**

They used battalion size strong points (U.S. 2d and 3d Divisions) on key terrain features that were beyond mutual supporting distance. These battalions fought when surrounded. The pressure on these units was, of course, relieved by the counter-offensive action of other units. When the enemy shifted to other battalions he was again countered by the offensive action taken by the units which had previously been engaged.

This combination of defense by widely separated units and maneuver of forces to new locations (demanded by tactical changes and offensive action—when the enemy's attack was blunted) incorporate many of the ideas expressed in this article.

Q. One final question: many of our readers want to know if **mobile defense** is here to stay or if it's a tactical "fad."

A. In this age of broad front, mass and "lightning" warfare, we must always be prepared to exploit our mobility and employ some form of "offensive" defense. In my opinion, **mobile defense** is the answer. As for its being a fad — I'm certain that curious military students in the days of Genghis Khan asked the same question. More recently, within the memory of many of us—airplanes, tanks and helicopters were considered "military playthings" of doubtful value. Today they're household terms.

Yes, **mobile defense** is definitely here to stay!

REALLY, THOUGH, THERE AREN'T MANY THINGS HE'S CALLED UPON TO REMEMBER

His life is a rather simple one. Modern military careers, however, require constant study and preparation for advancement.

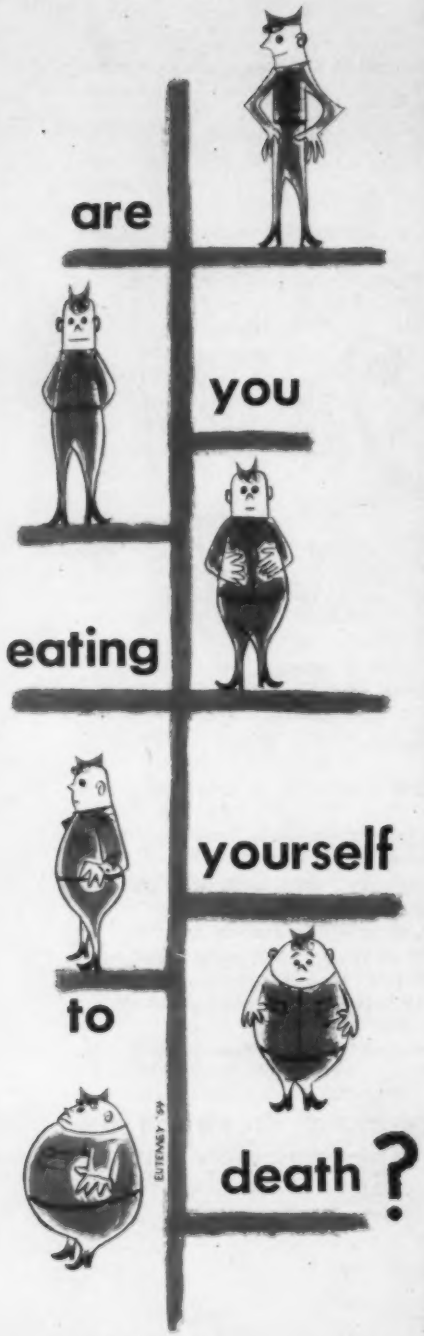
Even if you **could** remember everything you ever learned in resident courses—would you be up-to-date on the latest changes?

As an Infantry leader you must learn to skillfully execute a number of jobs. An elephant-like workload? . . . Not if you've prepared yourself with **Army Extension Courses.** And the best part of the AEC program is the fact that **Army Extension Courses** are **free!** (Where else can you get something for nothing these days?)

Don't forget! Write today for more information on the **free Army Extension Course** that you need. Write:

DEPARTMENT OF NON-RESIDENT INSTRUCTION

ARMY EXTENSION COURSES
THE INFANTRY SCHOOL
FORT BENNING, GEORGIA



IS your wife crazy about calories . . . demented over diets . . . nuts about nutrition? Does she pile your plate with potatoes and steak while she nibbles on raw string beans? Do you laugh at her "skinnier-than-thou" attitude, and poke fun when she switches from lemon juice and lettuce to corn flakes and yoghurt? Have you asked yourself whether it is vanity—or partly common sense?

And incidentally—have you seen yourself in a bathing suit lately?

If your trousers "shrink" every time they are laundered—if you are beginning to overlap the bathroom mirror—if you are not on nodding terms with your own knees—it's time to face the facts about your figure. Too many officers, tied to sedentary peacetime jobs, have begun to assume the shape of the chairs they sit in. Too many strategists are trying to translate "the big picture" and "the triangular concept" into purely physical terms. Their talent goes to waist.

No soldier, no leader of soldiers, can afford those extra pounds.

MAJ. WM. H. BRODBECK

Your waistline tells your age almost as well as a birth certificate. In the young, fat distributes itself over the body. It is sometimes hard to tell whether a younger man is overweight or built like a football tackle. With age, however, the arms and legs dwindle, and fat accumulates around the stomach, flank and neck with smaller proportions in the upper arms and buttocks. Middle-age spread is an anatomical fact—with it, comes the true "hour-glass figure." A fat man is an old man—or looks it.

Fat does damage to more than your looks. It cuts your efficiency, directly affects the way you feel. The body is a marvelous machine: it absorbs a few extra pounds without discomfort. Not until you lose those

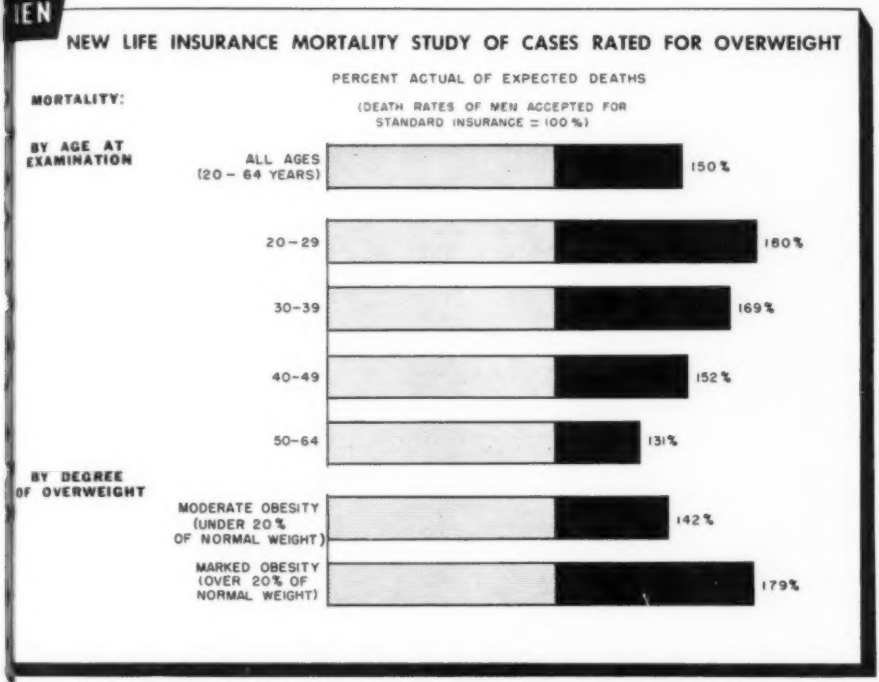
Civilian clothes conceal . . . what uniforms reveal.

In the first place, they spoil your appearance. An officer cannot command his superiors' respect and the admiration of his men when he looks like an overstuffed laundry bag. A leader's figure should be as crisp and trim as his freshly starched khakis. When physical appearance is noted on every efficiency report and critically appraised by the men of your command, you cannot enjoy the civilian pastime of watching your "beer muscle" develop. Loosely-fitting, heavily-padded suits conceal that watermelon form. Only in the shower after a game of golf is it apparent how civilian chests have slipped! But army clothes fit tight, and they are not padded. For the overweight, they are a spotlight . . . not a disguise.

pounds do you realize how much easier it is simply to move around. Twenty extra pounds slow you down as if you had to carry a wooden block of that weight in your arms. Get rid of it—you'll work better, move faster and feel like an April morning!

What happens to the overweight officer when war explodes overnight, as it did in Korea? About 6 months after the police action began, word reached the States that many officers over 35 were not able to keep up with their men, that younger battalion and regimental commanders were needed. Not that the younger men were more able—the older officers, veterans of World War II, learned their job in a hard school. But they just couldn't make that hill! Not until older officers began to trim down before even leaving the States did they prove the combat value of their experience. What good is it to have the know-how to lead a company or battalion if, physically, you cannot even follow it? The next war will probably come upon us as abruptly as the last. Would you be in condition to take a combat command—tomorrow?

Can't make that hill!


NEW LIFE INSURANCE MORTALITY STUDY OF CASES RATED FOR OVERWEIGHT
PERCENT ACTUAL OF EXPECTED DEATHS
(DEATH RATES OF MEN ACCEPTED FOR STANDARD INSURANCE = 100 %)
MORTALITY:
BY AGE AT EXAMINATION
ALL AGES (20 - 64 YEARS)
150 %
20 - 29
180 %
30 - 39
169 %
40 - 49
152 %
50 - 64
131 %
BY DEGREE OF OVERWEIGHT
MODERATE OBESITY (UNDER 20 % OF NORMAL WEIGHT)
142 %
MARKED OBESITY (OVER 20 % OF NORMAL WEIGHT)
179 %

Death rates are above normal at every age. The excess is relatively greatest among the younger men. The mortality ratios are high regardless of the time elapsed since examination, and tend to increase with time. Mortality also increases with the degree of overweight.*

There are even more drastic arguments for staying slim. You may be eating yourself into the grave. Statistics prove that it is the fat man who dies first. Every doctor knows this . . . and so do the insurance companies. In fact, overweight has become the most common reason for restricting coverage to substandard insurance. Your life expectancy drops with every extra pound. Excess weight places a heavy strain on all the vital functions of the body—hence the early appearance of diseases of the heart, kidneys, and bloodvessels among the overweight. Let your belt slip and your chance of dying from heart diseases jumps 1½ times. Chronic kidney disease becomes 1¾ times as dangerous to you, and danger from the liver, gall bladder and appendix also increases. Most striking penalty for excess poundage is diabetes. If you are 25% or more overweight, you are 8 times more likely to die of diabetes

*Courtesy of Metropolitan Life Insurance Company

than a man of average weight, 13 times more likely than an underweight! Obesity rarely appears on a death certificate as the cause of death, but it is a killer just the same. Apparently our traditional picture of a skinny spectre or a skeleton is all wrong. Death is a fat man . . .

If you don't care about your appearance, your health or your career, you probably don't give a hang about money. Nevertheless, it's cheaper to

You may be eating yourself . . .

. . . into the grave!

stay slim. Stock quartermaster uniforms will fit a slender figure at a fraction of the cost of tailoring to fit a fat one and, nine times out of ten, they look better too. The thin man pays less to the grocer and the restaurant. That waistline is expensive: it costs to put it on—it costs to keep it there. A fat man actually has to eat more to maintain his excess fat!

Feel better, look younger, live longer — at less cost! Reducing makes sense! But it does take effort. Only a few of us have a well-controlled food intake regulator or "appestat." These lucky people unsciously control their food intake to match their daily needs. The rest of us must plan and toil.

Exercise . . .

The extra hour of tennis won't do the job. Exercise is not enough. After a workout, the scales may show a distinct drop in your avoirdupois. This is only flattery. The loss is almost wholly water, and it is normally regained by eating and drinking within 24 hours. To rid yourself of one little pound of fat—for keeps—you would have to walk 36 miles! Moderate exercise tones your muscles; it gives you—after proper conditioning—that wonderful feeling of being in champion form. This is because of increase in elimination of waste and in the flow of blood to muscles. But exercise should be conducted for its own sake—**not** to reduce!

It seems as if your wives had the right idea after all. Dieting is the only solution. But haphazard dieting may do more harm than good—you must diet intelligently! That means —first and most important—consulting your doctor to make sure that it is **safe** for you to diet, and secondly, learning the facts and principles behind dieting. Beware of faddists! A book on reducing—an **authoritative** book, recommended by a competent medical officer—is worth its weight in wheat germ and blackstrap molasses.

The dieter needs to know all about food — that lima beans contain four times the calories of onions, for example, and eight times the calories of string beans! One banana or two teaspoonsful of peanuts give you as many calories as all the cauliflower, lettuce, mushrooms, spinach, and asparagus that you can eat in a normal day. The innocent-seeming salmon is 2½ times as fattening as the luxurious lobster—and so on.

. . . is not enough.

Remember, however, that though fat diets and medications may help at first, you cannot keep them up indefinitely. Every day the body calls for a certain quantity of proteins. Unwise dieting cuts into your margin of safety and may reduce vital body tissues instead of body fats. A well-balanced diet also requires carbohydrates, vitamins and minerals. You have to master your calory arithmetic—a careful count, day-by-day, is the only safe and sensible way to reduce. Consult—study—count: these are the keys to a successful diet.

Posture's the problem . . .

At the same time you diet, it will pay you big dividends to practice correct posture. Poor posture restricts breathing, blood flow and the normal functions of body organs; the effects are much like those of excess poundage. We all know people who stand slack and round-shouldered, who sit on their tail bones, propping the middle of the spine against the back of their chairs. The best cure is "thinking tall." This mental trick sets the backbone in the shallow curves nature designed for it. Just use the muscles of your trunk to raise the top of your head as high as it can go. Think tall!—You can feel your back straighten, your lungs expand, your head go up!

. . . not the stairs!

With practice, thinking tall should become automatic for you. But check your posture at normal intervals. If you are really standing—or sitting tall, a pebble dropped through the crown of your head would fall through the very center of your rib cage and land in the center of your pelvis. Choose definite times for checking yourself, such as the first 30 seconds after you start walking or sit down. Or choose a time when your posture is likely to relax —climbing stairs, for example. Not only will your posture improve, but the climb will place less strain on heart and muscles. Every trip grows easier until you shoot up flights of steps like a runner breaking the four-minute mile!

After making the effort to achieve correct posture and slim down to proper weight, it is up to you to stick to the straight and narrow. Remember that the hardest battle in reducing comes when you feel in fighting trim at last, and your stomach whispers that now you can relax and eat as you always did. Don't let yourself go! Invest in a full-length mirror and a scale. At regular intervals, hold command inspections for weight and posture. Remember to weigh yourself at approximately the same time of day each week, wearing approximately the same amount of clothes. Then if you are as much as three pounds overweight —go into training immediately—lose that three pounds before the end of

DESIRABLE WEIGHTS FOR MEN*
AGES 25 AND OVER

Height (with shoes)		Weight in Pounds (as ordinarily dressed)		
		Small Frame	Medium Frame	Large Frame
Feet	Inches			
5	2	116-125	124-133	131-142
5	3	119-128	127-136	133-144
5	4	122-132	130-140	137-149
5	5	126-136	134-144	141-153
5	6	129-139	137-147	145-157
5	7	133-143	141-151	149-162
5	8	136-147	145-156	153-166
5	9	140-151	149-160	157-170
5	10	144-155	153-164	161-175
5	11	148-159	157-168	165-180
6	0	152-164	161-173	169-185
6	1	157-169	166-178	174-190
6	2	163-175	171-184	179-196
6	3	168-180	176-189	184-202

*Courtesy of Metropolitan Life Insurance Company

the week! You may have to sacrifice a favorite desert, but gradually—your appetite learns to stay in bounds, and restraint becomes as natural to you as hunger.

Reducing is like getting out of bed: the longer you put it off, the harder it is. Prompt and sensible action **now** may save you weeks of rigorous dieting later. It may even save your health, or your career.

Fight to stay fit—stay fit to fight! For the soldier, a trim erect figure is more than a point of personal pride. It is the mark of his profession, a measure of his efficiency. We of the army have a lesson to learn from the army wife, and there is no reason why women should monopolize self-discipline and common sense. So, shall we join the ladies?

Watch that beer muscle.

• •

Courage is of two kinds: first, courage in presence of danger to the person, and next, courage in the presence of responsibility.—Clausewitz.

Here's what was done—

The reinforced rifle platoon in night relief and defense.

so you have to prepare a field exercise

Capt Charles L Butler

SUPPOSE you were handed this directive—What would you do?

"You are directed to prepare a tactical problem consisting of a conference and practical exercise involving a night relief and conduct of a defense of a reinforced platoon operating as part of a larger force. The problem will include situations and requirements in which the students, acting as platoon leaders and other members of a reinforced rifle platoon, plan and execute a night relief in place; and conduct a night firing exercise using live ammunition in defense of the position."

Not in your line? Imagine how the major* felt when he received it. Just a few months later, though, when the exercise was presented—he was practically an expert. I hasten to add that those who worked on the problem became something akin to experts, too.

It is not illogical to assume that this sort of thing might confront you or your CO in the near future. For this reason, I feel that a report on our solution might save you (and your unit) many man-hours, as well as a few premature grey hairs.

Let's start with the basic directive we received and move in logical order** through the problem until we reach completion.

DIRECTIVE

The directive called for the incorporation of an existing, non-firing night relief exercise into the new problem.*** The Major was then faced with the task of preparing the firing portion of the problem. As a guide, he used OCAFF letter ATTNG-23 253/240, dated September 1953, entitled "Night Training Exercise for a Rifle Platoon in Defense." This is a comprehensive guide for organizing an exercise for basic trainees. In our case, the problem was modified to meet the needs of The Infantry School. (In setting up the problem for your own unit, make whatever modifications are necessary to best serve the

needs of your unit).

As a starting point, we decided to precede the problem with a class on model platoon defensive positions in three stages of completion. Part 1 was designed to indicate day-old defensive positions; part 2 denoted improvements afforded by 4-6 days of work; and part 3 showed an elaborate defense set-up. This enables the students to see what our defensive positions look like on the ground and the improvement that must be made by those occupying the defenses. A new area is being prepared to illustrate a complete platoon defensive position. It is the platoon adjacent to the practical exercise platoon positions.[1]

PLANNING

With a deadline breathing like an ogre on our necks, it was necessary to study our needs and assign tasks so the work would be completed on schedule. These tasks included: the lesson plan for the detailed presentation of the problem; troops to prepare the area and act as the unit being relieved; transportation for instructors and equipment; rehearsals; work details to prepare and maintain the area; ammunition requirements; terrain reconnaissance; targets to represent enemy attack progress; demolition pits to represent friendly and enemy mortar and artillery fires; sound system forward of the line for battle noises; platoon positions; assembly areas and bleachers for the conferences and critiques.

Much of the planning was indoor pick-and-shovel work common to all firing problems. Naturally, we consulted the Communications and Weapons Departments to take advantage of their specialties—just as you might contact your signal and weapons specialists. At The Infantry School, the Weapons Department supplies safety officers on crew-served weapons. This insures that instruction on range cards and night firing techniques are re-emphasized. You would want to use your own "experts" for this task. With the over-all plan prepared, we proceeded to prepare the problem.

SCOPE

As currently presented to basic classes at The Infantry School, this problem consists of 3 daylight and 4 night periods (one hour each). First the class tours the model defensive positions, then it participates in a one-hour conference on the principles of the relief. After the conference, each member of the class goes on a reconnaissance and prepares relief orders, each acting as a platoon leader (this can be modified for platoon sergeants and squad leaders).

After supper in the field, the orders are discussed. The class is then organized into three rifle platoons plus two 57-mm recoilless rifle squads and a machine gun squad. Each squad has a sniper who is equipped with a sniperscope (infrared) for night firing.

After dark, the first platoon of students relieves the school troops on position. They, in turn, defend the position until relieved by the next platoon. The platoons waiting

*Major Bill Feltner, Jr.
**I am sparing no details. We learned that it's the little things that count in preparing an exercise.
***Problem No. 2845NB7

[1]Instruction in the old area will be discontinued when the new area is completed.

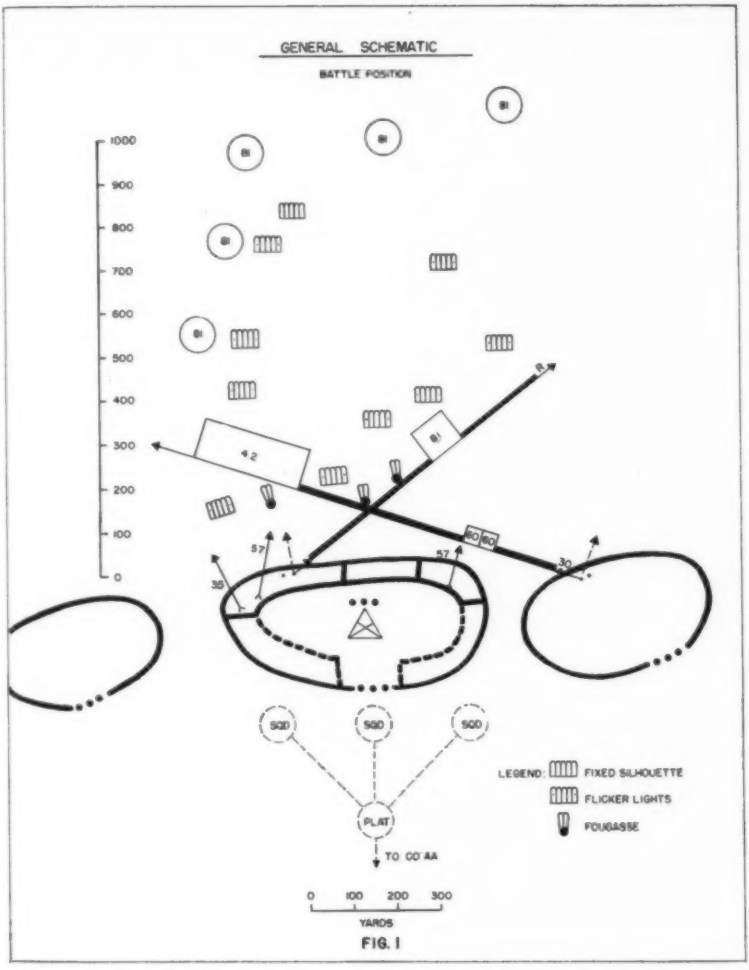


FIG. 1

to relieve those on position are given concurrent training such as a training film on the conduct of defense and refresher weapons instruction. After being relieved, the platoons are critiqued by selected students and the instructor and, as part of their instruction, observe subsequent reliefs.

PREPARATION

Since much of the preparatory phase of this problem was routine, I want to pass on some of the less routine experiences that will be of

value to you. (The schematic diagrams, figures 1 and 2, show the problem layout in detail.)

TERRAIN

Finding suitable terrain for this exercise was difficult because of the variety of weapons to be fired, the need for naturally defensible terrain, and the conflicts which arose when certain areas were reserved for other problems. When a suitable area was located, the tactical situation had to be developed to include adjacent units. When each position had been staked out on the ground, troops (with weapons) were placed on position to permit a group of defense experts to make certain that defense doctrine was followed. These experts also evaluated the overall plan of defense and made necessary changes. As soon as the terrain was approved, work was begun simultaneously on positions, communications, battle noise sound system, targets, demolitions, assembly areas, control point and instructional bleachers.

POSITIONS

Figure 2 shows how the crew-served weapons positions are integrated with those of the platoon. The troop emplacements are all OPEN for purposes of control, safety and economy. If a problem of this type is to be used frequently, it is mandatory that each position be revetted. We used wooden frames and salvage corrugated iron for siding. Standard two man, chevron, and horseshoe positions were constructed for appropriate weapons.

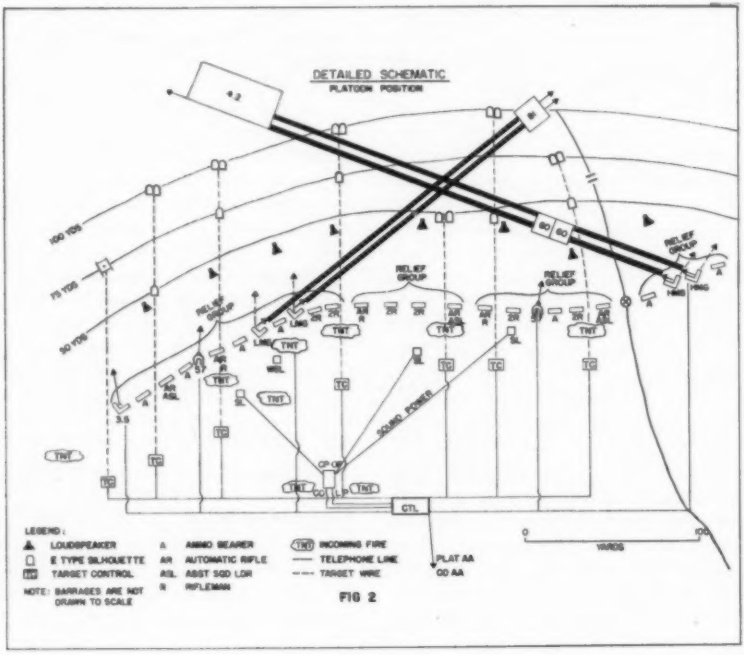


FIG 2

The CP-OP was composed of as many 3' x 5' holes as necessary to accommodate the command group. Ammunition boxes were used to floor each position to solve the water and mud problem.

Each rifle foxhole was equipped with parallel sets of right and left safety stakes which conformed to meet the standards for safe firing. Horizontal rest bars were nailed between the 2 forward and 2 rear safety stakes to provide grazing fire and assist in preventing high fire. We didn't use positive elevation stops for the rifles and automatic rifles because it was too unrealistic. But we did equip each automatic rifle position with a board for the bipod legs to prevent excessive digging in.

The 3.5-inch rocket launcher position is a chevron type with high posts for safety stakes. The machine gun and recoilless rifle positions are constructed of heavy wooden platforms and H-frames. The tripod legs are blocked. These blocks, however, do not guarantee correct lay of the weapon each time the weapon is emplaced. Experience shows that it is necessary to test fire the range cards each time the problem is run. Allow 1-2 hours for weapons safety officers to emplace and check weapons. (Students do not prepare the range cards since they relieve at night.) Because of the muzzle and backblast of the recoilless rifles, the horseshoe positions were completely sandbagged.

COMMUNICATIONS

The control point (see figure 2) serves as the communications center. Below is a listing of the number of phones and the nets.

Control Point		Net
1. Target control	7	stations
2. Crew-served weapons safety officers	5	stations: RL, 2-57RR, LMG, HMG
3. Platoon and company assembly areas	2	stations
4. Company commander	1	at platoon CP-OP
5. Simulated listening post	1	at platoon CP-OP
Total: 5	16	
Grand total	21	

The control officer and one NCO are needed to handle the control point telephones and two men need an hour to install and check the system.

The sound-power net is used so that the squad leaders can immediately report the enemy situation to their front and receive instructions and information from their platoon leader. The placement of positive anti-shorting devices near the clips of the TS-10 hand set, has insured continuous communication throughout the reliefs. By substituting EE-8 phones, for the sound-power phones, the platoon leader-squad leader conversations can be tied into an amplifier for problem observers to hear.

CAPT CHARLES L. BUTLER. Our author states that his purpose in writing this article was ". . . to pass on to others, some of the shortcuts and techniques uncovered during months of preparation for a field training exercise."

We hope that your field problem will have hours shaved from its preparation time because you have read this instructive article.

Capt Butler, a 1950 USMA graduate, was a rifle and, later, a heavy mortar platoon leader with the 7th Infantry in Korea. He is now assigned to The Infantry School.

Colored star cluster flares are used during the enemy attack to supplement wire communications. The relief order specifies which signals will begin the close defensive and final protective fires. It is not felt that these signals decrease the leadership of squad leaders because, in many cases, it would take too much time for them to get word to their more distant positions and it would be possible for one student to upset the problem sequence by firing ahead of schedule.

BATTLE NOISES

Student reaction to common battle noises is the meat of the enemy build-up phase of the problem. By proper interpretation of the squad leaders' reports, the platoon leader should make the correct decisions. We wanted a record with the following sequence of noises: tanks and barking dogs; automatic weapons fire; bugle calls; oriental voices; small ams fire; oriental voice giving a psychological warfare talk; noises of an all-out attack to include bugle calls, whistles, talking and firing and a bugle call for disengaging, talking and light firing. Since our record library had nothing on file similar to this, we made one by tape recording the individual sounds and placing them on a master record.

Eight speakers were installed about 50 yards forward of the platoon position (see figure 2). The speakers must be placed in defilade and preferably in a sloping hole, so the sound will carry to the students. You need one man at the control point to play the record on cue from the control officer. We found that two men can place the horns and make the connections in less than an hour. If problems develop, the necessary "trouble shooting" may require four more hours of work.

TARGETS

Figures 1 and 2 show target locations. The groups of silhouettes are fixed targets and are all placed more than 100 yards forward of the line. They are put in place after the students complete their daylight reconnaissance. Each group of fixed targets has red lights which are flickered on cue from the control point. These lights realistically duplicate the flash of firing weapons. They are elusive targets for any weapons but machine guns, which fire range card targets. (Two or three lights may be lost during an exercise.) Neon lights (NE-32) are best and may be centered on the silhouettes. They can be flickered at the control point with a "hot" wire.

Pull-type silhouettes are presented at 100, 75 and 50 yards, on cue of the control officer to the rehearsed men at the target control stations. They represent successful enemy penetrations of final protective fires. The enemy tank is the only pull target with a flickering light.

Since the TIS problem is not a unit exercise, the targets are not scored. If you were to use this exercise with a rifle company in one running, I suggest the targets be scored by coating the tips of the ammunition used—with three different colors of lithographic ink; each representing a specific platoon. In this way, the

Planning and preparation are necessary

score can be computed from the smears. (Page 11 of TM 9-1990 gives the details of this technique.)

DEMOLITIONS

Enemy artillery and mortar fire throughout the platoon position is simulated by demolition pits (see figure 2). There are 60 charges prepared, so that each relief may experience the feeling of close, incoming fire. The control officer cues an assistant to fire the pits during the enemy buildup for the attack. Properly emplaced ¼-pound charges may be used close to the student positions. For details on handling this type charge see OCAFF letter ATTNG-729.3/5 dated 4 February 1954, "Safeguards for the Use of Mines and Explosives in Training."

The concentrations and barrages are represented by demolition pits, each containing ½-pound charges of TNT. These are fired on the platoon leader's request to the company commander. An officer and two qualified demolition men can check the circuits and set the pits in four hours. If 81-mm mortar ammunition is available, the forward concentrations may be registered and fired on call by a trained platoon. Nine more demolition charges are located in the platoon assembly area. The officer at that point blows them as the relieving platoon goes forward.

FOUGASSE

We used a 25-gallon fougasse for each relief (see figure 1). The 6% thickened fuel is ignited by a white phosphorus grenade and spread by TNT. The platoon leader requests the fougasse from the company commander during the final protective fires. For safety, the fougasse is located further out than it would be in a combat situation. Considerable care must be taken when emplacing the fougasse since the wiring is easily disturbed by student fire. We found that four men could prepare three fougasses in one-half hour.

WIRING

The wire for your telephone, demolitions, fougasse and sound presents a problem. The wire used should be the type which has a waterproof covering and will not rot when buried in the earth. We found that splices were best in preventing short circuits if located above ground. Test stations about every 200 yards are best for trouble shooting. Approximately 30 miles of WD-1/TT wire was used in the construction of our problem. (Consult your communication experts for technical advice.)

to insure the success of a field exercise.

CONTROL POINT

The control point is also an observation post for the control officer. This building should be approximately 10′ x 12′ or large enough to house at least four persons who will operate 5 telephones, a turntable for battle noises and a switchboard for demolitions and flicker targets. The control point is also used to issue equipment to safety officers and for storage of needed materials. Subdued lighting is used in the building because of its proximity to the positions.

ASSEMBLY AREAS

Company, platoon and squad assembly areas must be selected and trails connecting them must be

cleared for night movement. Since concurrent training may be conducted in the company assembly area, space for projecting training films and placing weapons setups is desirable. In the assembly area, students assigned to crew served weapons are given refresher instruction in the use of night lighting devices and sight manipulation.

AMMUNITION

A detail of two men is needed to prepare the required ammunition for issue. One difference between the OCAFF exercise for basic trainees and this problem is the place of issue of the ammunition. With our students and with tactical units, ammunition may be safely issued in the company assembly area. This, rather than on-position issue, adds considerable realism to the problem. Here is a list of the munitions we use in conducting the problem for **three** platoons:

M-1 (clip)	4032 rds
BAR (box)	1800 rds
MG (belt)	7000 rds
3.5" RL	8 rds
57-mm RR	19 rds
81-mm mortar	125 rds
Cart, rifle, gren	148
Pract gren	162
WP gren	3
Rifle gren adapt	108
Illum gren MK1	36
Trip flares	12
Amber star parachute flares	6
Green star parachute flares	6
Red star cluster flares	10
White star parachute flares	18
TNT	63 lbs.
Electric blasting caps	180
Detonating cord	9
6% thickened fuel	75 gal.

ILLUMINATION

The OCAFF exercise provides for searchlight illumination during the enemy attack. Since our students receive separate instruction on night illumination, it is not a part of this problem. If your problem is to include searchlights, plan to spend some time with the "moonbeam experts" so that their efforts are both timely and effective.

During the play of our exercise, the platoon leader can request planes and illumination through his company commander. He is encouraged to provide his own illumination by using rifle grenade flares and illuminating hand grenades. Squad leaders, by the same token, should ask the platoon leader for light in their area to increase fire accuracy when necessary. We found that star cluster rifle grenades are satisfactory for illumination. Trip flares are placed forward and triggered with blasting caps by control.

PERSONNEL

The troops who man the area for the first relief are the ones who prepare, police and maintain the area prior to the exercise. (One officer and 63 men constitute the troops on line.) They furnish the crew-served weapons which are left on position throughout the reliefs. Because of the time required to emplace demolitions, sound systems and weapons —it is not recommended that the same personnel be used if the problem is to be run on successive days.

In addition, this exercise requires the services of at least 14 officers and 5 NCO's for purposes of control and safety. Remember, if you modify the exercise to meet the requirements of your unit, you may reduce (or increase) the number of personnel required. In any case, here's how we used these people:

1. One principal instructor (officer) who coordinates all activities.

He presents the conference, reconnaissance orientation, orders discussion and critique.

2. Two officers who coordinate all activity in the company and platoon assembly areas.

3. One officer to act as control officer. He mans the telephones and issues the necessary instructions to his three NCO assistants who handle telephones, control board and battle noises. This officer also acts as the "problem" company commander and as a listening post.

4. One officer is responsible for all ammunition and demolitions. He supervises the placement of demolitions and the issue of ammunition.

5. One officer is the "school troop" (work detail) platoon leader. He remains with the student platoon leader in the CP-OP. (He is concerned with safety and guidance.)

6. A total of three officers (one per squad) are stationed with participating squad leaders. They check squad members before firing to insure proper orientation and clean weapons after firing.

7. One officer remains with the rocket launcher squad for purposes of control and safety.

8. One officer and one NCO assistant are stationed on each of the two pairs of machine guns. These individuals should all be machine gun experts and supervise the lay and firing of the machine guns. (There is a tendency to overheat the LMG on this problem.)

9. There is one safety officer on each of the two recoilless rifles. This officer verifies the lay of the weapon prior to loading to engage a range card target.

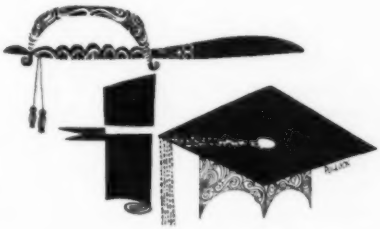
All safety officers must enforce the precautions necessary to prevent injury. However, they must not overcontrol or realism will be lost. Each officer is equipped with a flashlight and a mounted red star cluster rifle grenade for use in signaling in case of accidents or for prevention of possible accidents. On the red flare signal—all action ceases until the situation is corrected. A safety officer, of course, remains at his post during the reliefs.

Remember, when you duplicate this exercise—start with the OCAFF letter. As I mentioned earlier, it's the basic guide. Know what you want to do and improvise where necessary. Be realistic, but temper realism with the required safety precautions and common sense.

GOT

A

GRADUATE?



Have you a new lieutenant in the family—just out of OCS, ROTC, or West Point? Show him how proud you are by giving him a subscription to his PROFESSIONAL magazine, The Infantry School Quarterly. It's the perfect graduation gift!

The following information provides a means of keeping up-to-date on matters of professional interest.

TRAINING TIPS

Jeep Rattles. To keep the M38 Jeep hood from rattling, remove the hood-hinge pin and pinch both hinge sections together (very slightly). Then grease the pin and slip it home. If the pin is in bad shape and can't be re-used, get a new one (Ordnance Stock No. G740-7697481) from your Ordnance support unit.

•

Danger Area, Recoilless Rifles. A letter from the Raritan Arsenal, dated 26 March 1954, defines the rear danger area for the 75mm and 105 mm recoilless rifles due to blast and flying particles. This area is defined as a **triangle** with its apex at the breech of the weapon, its altitude an extension of the axis of the bore rearward 130 feet and its **base** 75 feet to either side of the extension of the axis of the bore. It is considered safe for personnel to be in the above danger area if they are at least 80 feet from the breech and do not face the rifle. Pending revision of SR 385-210-1, the danger area described above will be observed.

•

New Trucks. Check the processing tag on a new truck. If it says the engine contains break-in oil—it (the oil) is good for 500 miles. Check it, but don't change it for the first 500 miles. The engine needs that break-in period.

•

Deposits. The Armed Forces now have a new uniform law governing soldier deposits. Depositors now are able to withdraw deposits in cases of emergency instead of only at the time of discharge.

•

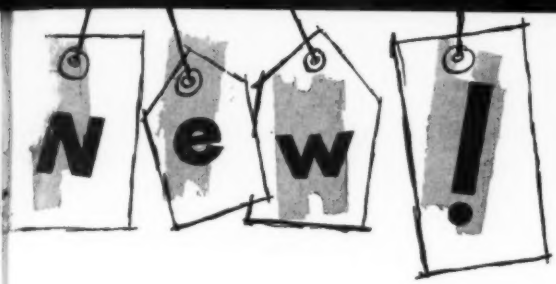
NEW AND APPROVED

New Generator. The addition of power-consuming accessories and communication equipment to Army vehicles, has demanded and received a new system for generating electrical current.

The "Alternator System," adopted by Army Ordnance, is capable of producing and controlling all the current needed for military vehicles at engine speeds ranging from idle to high.

The new waterproof system produces alternating current that is converted to direct current by means of a silenium rectifier mounted separately from the alternator. Formerly, alternating current has converted by a commutator and brushes mounted inside the generator housing. This change will add longer life to standard batteries.

Conversion kits will be issued for field installation on the M37, M38, M38A1 and MI35 truck.



NEW

New Film Technique. A series of experimental training films from 5-7 minutes in length have been produced at The Infantry School. The films are of a "how-to-do-it" nature and deal primarily with individual skills.

It is felt that utilization of Infantry School instructors will help raise the level of instruction among using units, i.e., Reserve, National Guard, ROTC and Training Units. The films should be implemented by the use of question and answer periods immediately following presentation.

The new films are concerned with only one teaching point and use extreme close ups to show each teaching step in detail. They will not duplicate existing training films and are especially valuable where instruction schedules do not allow time for lengthier films. A recent test indicated 85% audience comprehension.

The films are intended for immediate use (30-60 days after production) and are inexpensive to produce. Once the value of these films is determined, many lengthy training films may be replaced.

•

Mine Warfare. In August, The Infantry School commenced instruction on the new mine warfare doctrine recommended by the Second Mine Warfare Panel. The new doctrine incorporates the use of:

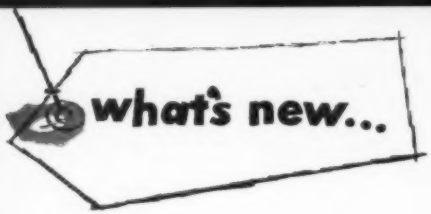
a. A new and more effective minefield pattern, employing clusters of both anti-tank and anti-personnel mines. (This replaces the three former patterns.)

b. A large single sheet record form, includes a lined section to facilitate sketching. (This replaces the three forms used under the old doctrine.)

The new pattern and record form are easier to teach and use than the multiple systems they replace. Description of the new patterns and samples of the record form are contained in Special Text 5-32-2, published by The Engineer School in July 1954.

•

QM Parachute Maintenance and Supply Co. The Quartermaster Corps has assumed responsibility for the preparation of Training Circulars and Bulletins pertaining to the employment of the Quartermaster Parachute Maintenance and Supply Company (organic to the Airborne Infantry Division). The QM is now preparing a Training Circular on expedient loading aids for moving heavy drop loads from the marshalling areas to departure airfields.



DEVELOPED

A portable transparency printer has been developed by the Navy Special Devices Center, Port Washington, New York.

The new printer is capable of reproducing Vu-graph overhead projector transparencies up to 8" x 10" in size. The machine operates on the same principle as an Ozalid reproducer except that it must be hand-fed and hand released. Suggested uses include reproduction of manuscripts, letters, overlays, charts and maps. It will produce a transparency in about two minutes. This printer is Signal Corps equipment. The Stock No. is 8A3112.

●

UNDER TEST

YC-130 Cargo Aircraft. The YC-130 cargo aircraft is expected to enhance delivery of troops and equipment into forward assault areas. It is designed as an assault-type aircraft and is capable of landing troops in Phase I of an airborne operation on unimproved airstrips. On outbound trips, it may be used to evacuate troops and equipment.

●

Assault Firing. The Infantry School is currently conducting tests in an effort to arrive at an additional Firing Table for the M1 Rifle Transition Course. The proposed table will be an Assault Fire Table designed to test the firer's ability in this type of firing during the final stages of an assault. Present plans indicate that "hip" firing will be permitted during the last 35 yards of the assault.

●

Techniques of Squad Control at Night. The squad that is to operate without natural or artificial illumination has a major problem, that of control. In a defensive situation, the squad leader cannot see the enemy situation to his front or even the two flanks of his own squad.

Human Research Unit No. 3, located at Ft. Benning, Ga., has developed and tested techniques (summarized by a set of SOP's) which produce the desired control even on the darkest night. These SOP's cover situations which can develop to the squad's front in such a way that each man applies fire to achieve a squad effect rather than the effect of individuals firing alone. This means that fire can be distributed, concentrated, redistributed or reconcentrated at a different place; all without direct orders from the squad leader. The squad leader controls, primarily, by training his men **before** battle, rather than in the nighttime fire fight.

These techniques have been taught to 18 squads from the 1st and 2nd Battalions of the 30th Infantry. On a specially designed test, these squads were 2-3 times as effective (in terms of number of hits on simulated attacking enemy) than 18 squads from the same battalions that had not received the training.

A training circular describing these techniques will be published soon.

MANUALS

FM 21-6, Techniques of Military Instruction, dated May 1954, has been published by DA. This publication supercedes TM 21-250. It is designed to assist army instructors in teaching efficiently, and presents specific methods and techniques of military instruction which will tend to insure successful teaching.

FM 21-150, Hand to Hand Combat, has been revised and published. The revised FM 21-150 stresses aggressive offensive action by the individual soldier using the equipment and material available to accomplish his mission.

Changed. Change 2 to FM 23-15, "Browning Automatic Rifle, Cal. .30 M1918A2," prepared by The Infantry School, was published on 1 June 1954. This change presents the following new material:

a. A discussion (illustrated) which accurately and clearly shows correct sight alignment as seen by the firer. Emphasis is placed on the fact that the firer's vision is concentrated on the front sight and that the rear sight and the bullseye appear fuzzy.

b. An explanation of the recent separation of transition firing from the qualification course. (A firer now qualifies on the known distance range and must confirm that qualification by achieving a minimum of 130 points out of a possible 239 points on the transition range.)

c. A firing table that can be used for both instruction and record firing.

d. Instructions (new) for the conduct of pit scoring during record firing.

e. A redesigned Quick Fire Course (Table VIII). The AR quick fire course may now be superimposed on the M1 rifle quick fire course with a minimum of change. Only one additional pit is required for the automatic rifle quick fire course.

●

Revised. FM 72-20, "Jungle Operations," was printed and distributed in July 1954.

●

Change 1, to FM 23-5, "U. S. Rifle, Caliber .30, M1," has been forwarded to Government Printing Office. This is a major change, affecting about 30% of the manual.

●

Change 3 to FM 21-75, "Combat Training of the Individual Soldier and Patrolling." The manuscript has been forwarded to the Government Printing Office for printing.

●

Training Circular. TC-( ),* "Use of the M34A1 Sight Unit With the 81-mm Mortar," was forwarded to the Government Printing Office for printing.

●

UNDER STUDY

Heavy Drop Platforms. 3,500 and 7,000 pound heavy-drop platforms equipped with inflatable packs to absorb landing shock and outriggers to present toppling are currently under study. Platforms of this size, if successful, would provide greater flexibility in the delivery of heavy items by parachute and conserve the amount of weight required to drop a given item in those weight categories. It will be possible to drop a 3,500 pound load with a lighter platform than is presently used.

*(Number not yet assigned.)

SOLH

E R

The stars swing down the western steep,
And soon the east will burn with day,
And we shall struggle up from sleep,
And sling our packs and march away.

In this brief hour before the dawn
Has struck our bivouac with flame,
I think of men whose brows have borne
The iron wreath of deadly fame.

I see the fatal phalanx creep
Like death, across the world and back,
With eyes that only strive to keep
Bucephalus' immortal track.

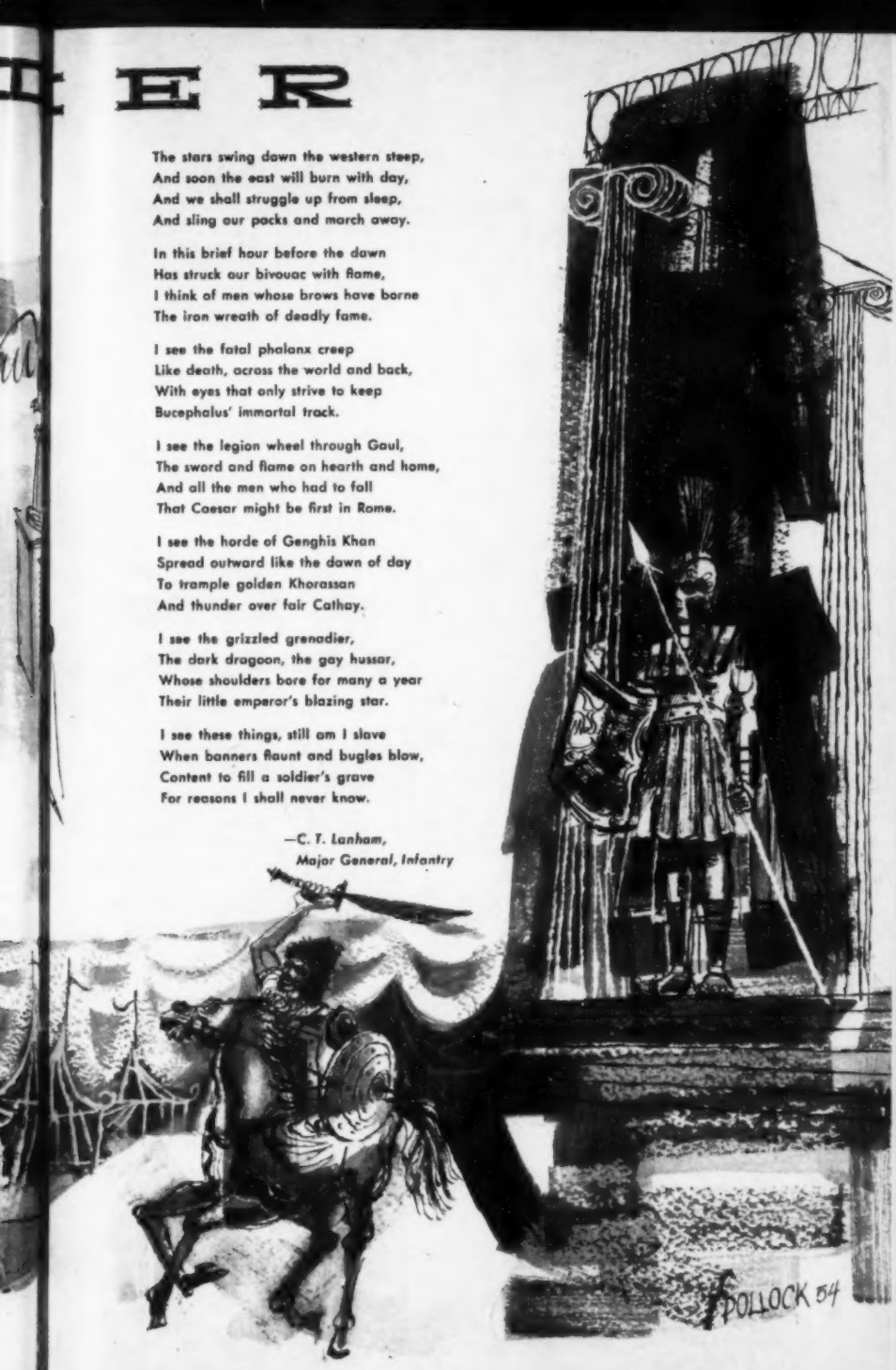
I see the legion wheel through Gaul,
The sword and flame on hearth and home,
And all the men who had to fall
That Caesar might be first in Rome.

I see the horde of Genghis Khan
Spread outward like the dawn of day
To trample golden Khorassan
And thunder over fair Cathay.

I see the grizzled grenadier,
The dark dragoon, the gay hussar,
Whose shoulders bore for many a year
Their little emperor's blazing star.

I see these things, still am I slave
When banners flaunt and bugles blow,
Content to fill a soldier's grave
For reasons I shall never know.

—C. T. Lanham,
Major General, Infantry



HELP FOR THE S-2

by LT. COL. CECIL C. HELENA

The battalion S2's job in combat is obvious and clear cut. The S2's work in garrison is not always so sharply defined. As a consequence the S2 often finds himself vulnerable to "odd jobs" and "in addition to" assignments. When this happens, the onus must be laid at the S2's own doorstep.

Recently I was approached by an S2 who said that in the absence of a comprehensive regimental training program, there was not enough work to keep him busy. When asked for his solution, he replied that he imagined it would be necessary to wait until regiment published a "comprehensive" intelligence training program.

Somewhere along the line this officer failed to understand or grasp his responsibilities. After giving the matter considerable thought, I believe that the following check list for S2's in garrison is not only in order but a necessity. It is, I feel, of value not only to battalion (and regimental) S2's but to their commanders as well. It goes without saying that every question on the list should be answered with—YES.

S2 CHECKLIST (GARRISON)

MAPS AND DOCUMENTS

a. Do you maintain the following road maps:
   1. Of the United States? .....
   2. Of the area in which your unit might be employed in case of civil disturbance? .....
   3. Of routes to possible ports of embarkation? .....

b. Is an easy-to-read mileage map of the post displayed in the battalion area (including reconnaissance routes from the battalion CP to principal intersections, important terrain features, and training areas)? .....

c. Do you publish a daily local weather forecast? .....

TRAINING AND TRAINING AIDS

a. Are tests made to check the validity of entries on training status charts pertaining to intelligence subjects? .....

b. Are lesson plans and full preparations for instruction in intelligence subjects listed on inclement weather and other standby schedules? .....

c. Do you preview and publish reviews of intelligence training films? Do you submit these to the S3? .....

d. Do you have aggressor equipment on hand? .....

e. Have you arranged for intelligence play for platoon and company field exercises? .....

f. Have you requested intelligence play for battalion field exercises through regiment? .....

g. Have you seen to the training of the pioneer and ammunition platoon and other selected units as the regular battalion aggressor force? .....

h. Have you made an index of all training aids available for intelligence subjects? .....

i. Have you made an index of historical examples for

use in instruction on intelligence subjects? .....

j. Have you indexed articles in The Infantry School Quarterly and other publications pertaining to intelligence operations and training in intelligence subjects? (Keep a separate file on those articles which represent doctrine and those representing the author's own ideas.) .....

SECURITY

a. Do you have a publicity campaign to increase military security consciousness? .....

b. Have you made tests to determine the effectiveness of security measures?* .....

c. Have you made inspection of facilities and procedures for handling classified documents (see SOP)? .....

d. Do you make weekly inspections of the status of security clearances for key battalion personnel? .....

LIAISON

a. Do you maintain constant liaison with the battalion commander, the battalion executive officer and lower commanders so that you know their intelligence requirements and they are aware of the capabilities and accomplishments of your section? .....

b. Do you inform the battalion CO of what you are doing every week and seek his suggestions for future projects? .....

c. Do you see the battalion executive officer at frequent intervals (daily, if practicable)? .....

d. Are you constantly suggesting to the S3 the inclusion of intelligence subjects in the training program? .....

e. Do you assist the S3 in the following ways:

1. Do you assume responsibility for the planning and supervision of training in map and aerial photo reading, reconnaissance patrols, camouflage and concealment, enemy mines and booby traps, and other subjects falling within your field? .....

2. Do you make your recon facilities available to the S3 in the preparation of his training projects? .....

f. Do you visit each company commander at least once a week to inform him of the intelligence facilities at his disposal? .....

g. Do you watch the companies in training and discuss training problems with the various company commanders? .....

h. Do you exchange ideas with other S2's? .....

*Tests for security measures are not usually performed by the Battalion S2. The S2 usually requests local CIC Units to make such tests. This agency is used to avoid involving local (Bn or Regt) personnel who may be biased or partial in the performance of such tests.—Editor.

Use it to measure yourself and your section.

i. Do you maintain layer-contour maps of the post for reference in battalion headquarters? Are terrain reference data included on these maps?* .....

j. Do you maintain up-to-date aerial photographs and mosaics of important training areas?* .....

k. Do you maintain adequate supplies of terrain maps of the post for training purposes? Are these properly stored and filed?* .....

l. Do you prepare subject schedules and lesson plans for intelligence subjects in which further instruction for battalion personnel can be expected?* .....

m. Have you established permanent problems and tests in reconnaissance and patrolling? Have the lesson plans for these been filed and the problems permanently laid out on the ground?* .....

n. Have you arranged for the following devices in your campaign on communism:*

1. TI&E periods? .....
2. Posters? .....
3. Five-minute "rider" periods to regularly scheduled periods of instruction? .....

That's your job, S2. The checklist is a yardstick against which to measure yourself and your section. It should be used as an aid to help accomplish the many detailed S2 duties not normally known to battalion officers. Keep it—adapt it—use it! It cannot do the job for you, but I know it can become one of your most helpful tools.

Publication of this article is not necessarily to be interpreted as reflecting the thought of The Infantry School or The Infantry School Quarterly.—Editor.

LT COL CECIL C. HELENA. This second in a series of staff articles comes to us from one who is well qualified to outline the functions of intelligence. He has been G-2 DA, G-2 FEC and is now G-2 AFFE. He is a graduate of the Strategic Intelligence School and the Basic and Advanced Courses, The Infantry School. He has also held numerous positions of command and served in the Pacific during WW II. Colonel Helena received his ROTC commission through Oklahoma A&M in 1941.

ARE YOU AN ICEBERG?

Are you keeping ⅞ of your ideas under water? Unfreeze! Send US your suggestions on tactics, administration, training. See your ideas in print—and get paid for it!

*Coordinate with S3 since these are not primarily S2 duties.

how would YOU do it ?

Lt Col Donn R. Pepke

Read the situations, study the maps and see if you come up with Lt. Colonel Pepke's solutions to these tactical problems.—The Editor.

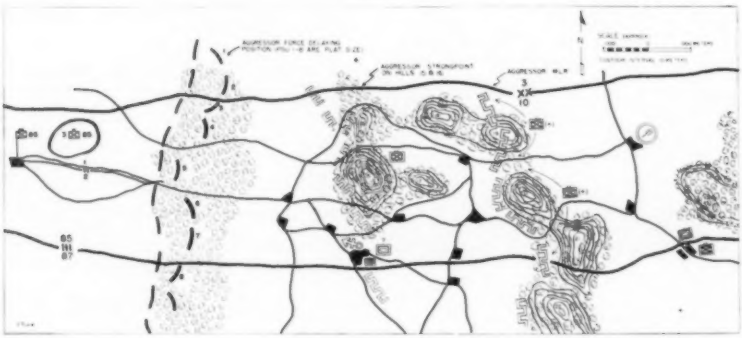
GENERAL SITUATION

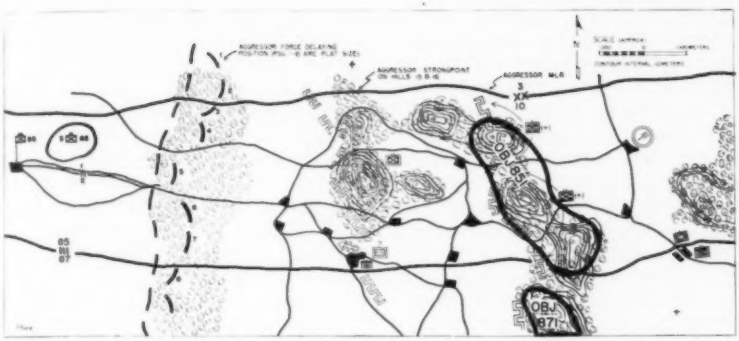
The 10th Infantry Division, a part of US V Corps, has been attacking to the east for the past several days and, by 042000 hours June, had advanced to the line shown on Map A. Aggressor resistance has been characterized by delaying actions. The composition and strength of enemy forces opposing the 10th Infantry Division are as indicated on Map A. Division G2 estimates that the enemy capability for offensive action is limited to counterattacks by battalion or smaller units. Air superiority has been achieved by friendly forces. The terrain within the division zone of action offers excellent cross-country trafficability and all streams are fordable by both foot troops and vehicles.

SITUATION 1

At 042030 June, you, as Regimental Commander of the 85th Infantry, received the following oral order from the Commanding General, 10th Infantry Division: "10TH INFANTRY DIVISION CONTINUES THE ATTACK AT 050600 JUNE WITH 85TH AND 87TH INFANTRY REGIMENTS ABREAST, 87TH INFANTRY ON THE RIGHT: SEIZES OBJECTIVES 851 AND 871. ON ORDER, CONTINUE THE ATTACK TO THE EAST. 85TH IN-

Map A





Map B

FANTRY: ATTACHED COMPANY A 62D TANK BATTALION, BATTERY A 43D AAA AW BATTALION—ATTACK TO SEIZE OBJECTIVE 851. ON ORDER CONTINUE THE ATTACK TO THE EAST." (Map B)

PROBLEM 1.

What objectives would you select for your attacking battalion(s) in order to seize and secure Objective 851?

PROBLEM 2.

What formation will you select for the initial attack?

PROBLEM 3.

Give a brief description of your plan of maneuver.

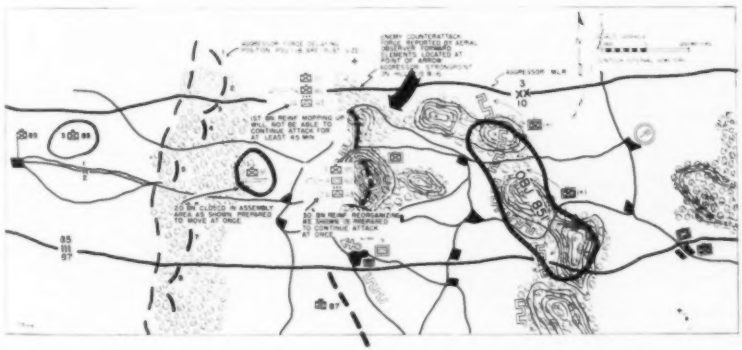
SITUATION 2

The attack of the 85th Infantry progressed until the location of subordinate units is as shown on Map C. The enemy force counterattacking against elements of the 85th Infantry is estimated to consist of ten (10) tanks and one hundred (100) Infantry.

PROBLEM 4.

What are your orders to your battalion commanders?

Map C



PROBLEM 5.

What are your instructions to your fire support coordinator?

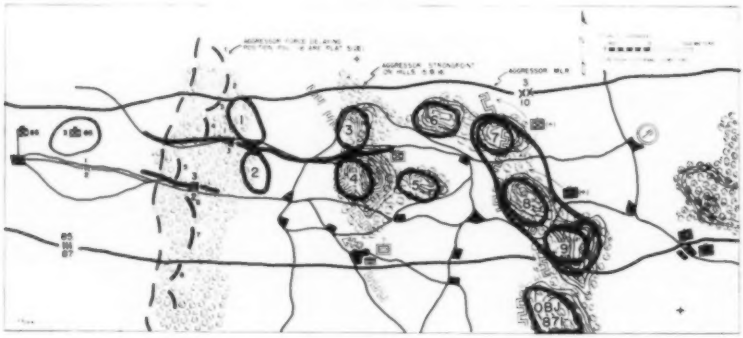
SOLUTIONS TO PROBLEMS 1-5

1. See Map D. You select Objectives 1 and 2 in order to provide for a coordinated attack of two battalions against Hills 15 and 16. You select Hills 15 and 16 as objectives because they are terrain features which dominate the entire regimental zone and are occupied by the enemy. Due to the strength of enemy dispositions, a requirement exists for an attack by two battalions in order to seize these terrain features. Therefore, Objectives 3 and 4 are selected to provide necessary control and convergence of effort in an area where prolonged and difficult combat is anticipated. Objectives 5 and 6 are selected to provide for a coordinated attack of two battalions against the assigned regimental objective. Their seizure will facilitate a coordinated attack of two battalions with maximum fire support against the enemy MLR (7 and 8). The final objective (851) consists of three distinct hills which must be seized in order to control the objective area adequately. Since any two of these hills are too large to be seized by one battalion in a single assault, each is designated as a battalion-size objective.

2. The initial attack of the regiment will be made with two battalions abreast to seize Objectives 1 and 2. The dense woods through which the attack must proceed and the nature of enemy dispositions indicate a requirement for a two battalion attack.

3. Because of the built-up areas in the right portion of the zone, maximum effort will be concentrated on the left. Your plan of maneuver should visualize attacking the initial objectives with the battalion now occupying the northern portion of the regimental zone of action and the reserve battalion. In order to gain some measure of deception, the battalion occupying the southern portion of the regimental objective will support the regimental attack by fire. It will become the regimental reserve upon seizure of Objectives 1 and 2. After seizure of the initial objectives, the two attacking battalions will launch a coordinated attack against Objectives 3 and 4. Thereafter, you may desire to em-

Map D



ploy the reserve battalion in the zone of either of the attacking battalions to maintain the momentum of the attack. Your plan of maneuver should be visualized at least through the seizure of Objectives 3 and 4. Your battalion boundaries will be extended forward only as far as you can clearly foresee the action. The attack of Objectives 7 and 8 with two battalions will insure an entrance into the regimental objective and facilitate the seizure of Objective 9.

4. You should issue the following order simultaneously to your three battalion commanders: "AN ENEMY FORCE ESTIMATED TO CONSIST OF TEN (10) TANKS AND ONE HUNDRED (100) INFANTRY ARE PREPARING TO ATTACK 1ST BATTALION FROM THE NORTHEAST. COMMANDING OFFICER, 1ST BATTALION: CONSOLIDATE PRESENT POSITIONS AND PREPARE TO REPEL ENEMY COUNTERATTACK. COMMANDING OFFICER, 3D BATTALION: CONTINUE ATTACK TO SEIZE OBJECTIVE 5. ON ORDER CONTINUE ATTACK TO SEIZE OBJECTIVE 8. 1ST AND 2D PLATOONS, COMPANY A 62D TANK BATTALION AND ONE SECTION, 2D PLATOON, BATTERY A 43D AAA AW BATTALION DETACHED YOUR COMMAND AND ATTACHED 2D BATTALION EFFECTIVE NOW. COMMANDING OFFICER, 2D BATTALION: WITH 1ST, 2D PLATOONS COMPANY A 62D TANK BATTALION AND ONE SECTION, 2D PLATOON, BATTERY A 43D AAA AW BATTALION ATTACHED, ATTACK AT ONCE THROUGH NORTHERN PORTION OF REGIMENTAL ZONE OF ACTION TO DESTROY ENEMY COUNTERATTACK FORCE AND SEIZE OBJECTIVE 6. ON ORDER CONTINUE ATTACK TO SEIZE OBJECTIVE 7. DIRECT COORDINATION WITH COMMANDING OFFICER, 3D BATTALION AUTHORIZED REFERENCE ATTACHMENT AND DETACHMENT OF SUPPORTING ARMS."

LT COL DONN R. PEPKE. The author, an experienced commander, was commissioned via the Thomason Act in 1939. During World War II he served with the 63rd Infantry Regiment in the Pacific. He has the unique distinction of having started his career with the 63rd Infantry as a company commander and later, as Regimental Commander, of leading it into combat. Col. Pepke is currently with the Tactical Department, The Infantry School.

The friendly force to be used against the counterattacking enemy should be of sufficient strength to insure success of the attack. It should also be assigned an objective. This will not only provide the necessary control and maintenance of direction, but will also insure that an area is secured from which the regimental attack can continue. The attachment of tanks and antiaircraft weapons to the reserve battalion making the attack around to the north will provide additional antitank means and supporting fires. No tanks or antiaircraft artillery are detached from the 1st Battalion because it is still fighting to secure its objective and must have supporting fires to resist the enemy counterattack until such time as the 2d Battalion gets into action.

5. You should give the following instructions to your fire support

coordinator: "ARRANGE FOR AIR STRIKES ON ENEMY COUNTER-ATTACK FORCE. CONCENTRATE ALL AVAILABLE ARTILLERY FIRES AGAINST ENEMY FORCE IMMEDIATELY. COORDINATE FIRES SO THAT, WHEN REQUESTED BY 2D BATTALION COMMANDER, ALL AVAILABLE SUPPORTING FIRES CAN BE PROVIDED FOR THAT BATTALION."

All commanders should be informed of the enemy situation. Both artillery and air should be requested against the enemy counterattack force. Enemy armor is a very lucrative target for air. Although artillery will not destroy armor, it will force the tankers to button up. It will inflict casualties among the attacking Infantry and separate the Infantry from the tanks, thus reducing the speed of the force.

STAR UNIT . . .

The 211th Infantry

1946—World War II is over! Cars and washing machines are rolling off assembly lines that, only months before, were producing tanks and submachine guns. The GI Bill is a main topic of conversation and, from Tokyo to Berlin, the byword is "stateside, here I come!" With one exception. In Florida, strength is being forged, instead of decreased. The 211th Infantry Regiment is organized and, from that time on, stands ready to defend our southern borders against any possible aggression.

1947-1954—Time and again the 211th Infantry serves the state of Florida in time of disaster. The cry of "hurricane" becomes the regimental call-to-arms. In numerous ways, the unit aids civil authorities and saves life and property. A part of the 51st **(RATTLESNAKE)** Division, the 211th, southernmost regiment in the continental United States, can well be proud of its record.

1954—Colonel Robert A. Ballard, combat leader of the 501st Parachute Infantry Regiment during World War II, now commands the 211th. Colonel Ballard writes:

"The **INFANTRY QUARTERLY** materially assists in filling the gap between the reserve component officer and his colleague in arms on active duty, keeping him advised of the latest developments in his military profession."

Many thanks to Colonel Ballard and his command, the 211th Infantry Regiment, Florida National Guard.

In the next issue we salute another outstanding regiment, a STAR UNIT which has subscribed 100% to the **INFANTRY SCHOOL QUARTERLY.** Watch for it—for it may be YOUR regiment.

MEET THE PROVOST MARSHAL

Lt Col Ralph B. Vote, Jr.

THE ancient Latin "praepositus," irrespective of his difficult title, was the predecessor of today's Provost Marshal. Though separated by the curtain of history, the "praepositus" job of "enforcing the rules and regulations of his commander"—is that of the modern Provost Marshal.

Times have changed. Techniques have changed—but as we examine the responsibilities of two officers separated by centuries—it would seem that men remain unchanged. Today, as in the armies of the ancients, there is an ever-present need for laws, law enforcement and the punishment of those who break laws.

Today's Provost Marshal is primarily interested in the enforcement of laws, rules and regulations, but his responsibilities do not stop with these. Today, his duties have expanded to include traffic control, processing of PW's, investigation of crimes, return of stragglers, stockade management and a number of other related tasks.

Everything the Provost Marshal does concerns Infantry commanders. For this reason, I think both Provost Marshal and Infantryman will be assisted if we tell what the Provost Marshal does and, by indirection, show how his duties affect unit commanders.

Let's examine the responsibilities of the Provost Marshal in greater detail:

Law Enforcement. You undoubtedly know of soldiers, who in passing an MP on duty, remark "those guys get a bang out of catching soldiers during off-duty hours."

Nothing could be further from the truth. The MP does not delight in this sort of thing, though he often must do so in discharging his duties. Why? I suspect that every old soldier reading this has already given the answer. It is, of course, because some men soldier only between 0800 and 1700.

Once these men are no longer under the watchful eye of their commanders and first sergeants they forget the rules of behavior and dress. They also forget that the Provost Marshal's job, in conjunction with his MP's, is to see that no member of the military does anything that will bring discredit upon the uniform or to the U.S. Army. This is not only important in the U.S., but is equally (or perhaps more) important abroad—where soldiers and officers are diplomats without portfolio.

Here's something else you have overheard . . . "those MP's—keep away from 'em. Every time you get caught off base you get a disciplinary report."

That, as we know, is not true. Disciplinary reports are sent in on men who are guilty of serious violations. Such reports generally reflect an incident that brings discredit to the service. These reports (where warranted) are, to be certain, forwarded through channels to the offender's commander for necessary disciplinary action.

Should any violation result in confinement—the offender again comes under the Provost Marshal's supervision. The local confinement officer will be an MP officer. This officer is no old fashioned "turnkey," but uses modern, workable methods of rehabilitating an offender and preparing him for return to his unit and useful duty.

Criminal Investigations. Any organization composed of thousands of human beings with widely diversified backgrounds, education and training must be on the alert for crime. Since crimes do occur in the army, we have our own MP criminal investigators.

THE PROVOST MARSHAL'S PRIMARY INTEREST IS THE BUT HIS RESPONSIBILITIES

For example—in the case of black market operations, where supplies and equipment needed by Infantrymen "leak" into civilian markets—the MP criminal investigators go to work. When a crime such as murder or arson is committed, the responsibility for the investigation rests with the Provost Marshal's MP criminal investigators. This, of course, leaves the law breaker's commander free of this task. (Something every Infantryman can appreciate.)

These modern sleuths apply the most up-to-date methods of crime detection. They have mobile crime laboratories in which to perform an on-the-spot analysis of all types of evidence. They use the polygraph,

better known as the "lie detector," which often provides excellent leads.

Prisoners of War. In the treatment of PW's our army (and, of course the Provost Marshal) is guided by the humane principles established by the Geneva Convention.

The responsibility for processing PW's starts with the Division Provost Marshal, goes upward through the various echelons and ends with the Provost Marshal General.

ENFORCEMENT OF LAWS, RULES AND REGULATIONS . . . DON'T STOP WITH THESE.

Here's how it works:

As soon as an Infantry regiment, for example, has obtained the necessary intelligence through interrogation—the Infantry's responsibility for guarding PW's is over. From this point on . . . guarding, evacuating and processing prisoners becomes the responsibility of the MP's. There will be times, however, when the PW problem becomes too big for the military police to handle. In such cases they have been known to ask the Infantry to assist in maintaining order.

The Prisoner of War Information Bureau files all information on PW's. It exchanges this data with the enemy through a neutral country when necessary.

Stragglers. The modern straggler doesn't walk, he hitch hikes. This means that our military police must establish road blocks (at strategic points) to check the occupants of all vehicles. This precaution, however, is not the perfect answer—some men still manage to get through. For this reason, MP's at Army and in the Communication Zone are also alerted to pick up stragglers. Naturally, these men are returned to their units as rapidly as possible. In connection with this matter of stragglers—did you know that during the American Revolution and later, during the War Between the States, the first mission of the Provost companies was the collection of stragglers? It's interesting, however, to note that at the start of the Battle of Gettysburg, General Meade directed the Provost Guard company commander, Captain Farrell (First, Minnesota) to put his men on the line. This was done because there was no time to pick up "the stragglers and skulkers" from the Army of the Potomac. History records that Captain Farrell's MP's fought "bravely and well"—and when the battle was over the company was reduced to about half its former strength.

Traffic Control. As every Infantryman knows, combat traffic can produce snarls that exceed those at Broadway and Times Square during the rush hour. This will often happen despite a unit commander's well conceived plans. To prevent such snarls, the Provost Marshal's MP's must be trained in the matter of traffic control—to insure that the troop movements are smooth and orderly.

You can be of tremendous assistance if you mark the lead and tail vehicles in each march unit, serial and convoy. This gives MP control posts, not only a measure of control over the movement of your unit,

(particularly if it's a priority move) but enables the control posts along the route to keep your division headquarters abreast of your progress. The latter is often very important, particularly during an offensive.

The MP's stationed at these control posts are, as a result of reconnaissance and information obtained from headquarters, familiar with the road on which they are stationed. This means they can give you the data on the condition of the road and bridges ahead, location of adjacent units, local guerilla activities, routes to nearby installations, towns and cities and even direct you to a place where you can get a cup of coffee. If they don't have the information you need at their fingertips, their communications will enable them to get it for you in nothing flat.

During the retrograde phase of action in Korea, little used roads were patrolled daily by MP's to make certain that if a secondary road was needed by a commander—he could be told whether it was clear and usable.

In addition to traffic control per se, the MP's on the MSR serve you in other ways. They often escort high priority units and ammunition trains and equipment badly needed by front line troops. They see that supplies reach units and that vehicles are not abused by excessive speed and wanton carelessness while away from home base. In addition, these MP's act as an antiguerilla force. In this latter capacity, they take the measures necessary (within their capability) to stop ambushes or sporadic small arms fire and keep the MSR open — preventing bottlenecks and delay.

Miscellaneous Duties. The responsibilities we've discussed so far will vary to some extent with the needs of local commanders and the nature of the situation confronting their troops. Under certain conditions, Provost Marshal troops guard highly secret war rooms, commanders, VIP's, protect supplies moving by rail and in ports, control mobs and maintain the security of military and industrial installations. It's frequently all in a days work.

Yes! It pays big dividends to understand some of the many problems the Provost Marshal faces—as well as his responsibilities. Get to know him; he can help you. Remember your Provost Marshal has a thorough knowledge of Infantry organization and operation. His plans are, for the most part, adapted to meet your needs and his sole reason for being is to serve and aid his immediate commander and you — the Infantryman.

LT COL RALPH B. VOTE, JR. "I wrote this article in an attempt to create a better understanding of the Division Provost Marshal's duties. In the training phase of a division, I have found that there is often a dim awareness of the Provost Marshal and his functions, but when the training is over and the shooting begins—awareness begins."

So writes Lt Col Vote who has been engaged in Provost Marshal activities in Europe, Korea and the United States for more than a decade. He is now Chief, Organization, Plans and Training, Provost Marshal Section, Headquarters, 5th Army.

. . . here's how to make a practical field map board that will assure you of a

CP at your Finger Tips

Maj Roderick A. Stamey

IF YOU ever had to stand in the rain trying to orient a soggy map, taking notes at the same time, no one will have to convince you of the need for a really practical field map board.

The small unit Infantry leader often has to plan and fight far from the conveniences of a command post; it is not surprising that one design after another of map boards and map cases has been offered for sale. Almost all of these have failed to satisfy the combat requirements of the troop leader.

However, here are the details on one that does. It incorporates the ideas of several experienced junior leaders and was tested successfully by a battalion commander. As a matter of fact, he borrowed the pilot model and, to the best of my knowledge, is still using it.

This board has several excellent features. For one thing, it is easy to make. For another, it is more than a mere map board; it is a hand-carried operations office. On one side, space is provided for the map, or maps, to be placed under acetate and fixed into position. This space is big enough to accommodate a 1:25,000 map of a regimental defensive area (extended frontage). On the other side, are printed sections containing both basic information for the field commander and outlines on which to record current information and instructions. (See Pages 76 and 77). They can be cut out and pasted on the map board.

On the next two pages are printed the operation order blank (Panel A), miscellaneous notes (Panel B) and the troop leading steps (Panel C). These pages are designed to be clipped out and pasted on your map board.

OPERATION ORDER	MISCELLANEOUS NOTES
1. SITUATION a. Enemy Forces: b. Friendly Forces: c. Attachments and Detachments: 2. MISSION 3. EXECUTION a. 4. ADMINISTRATION AND LOGISTICS a. 5. COMMAND AND SIGNAL a.	

AUTHENTICATION CODE

AS SPECIFIED BY
INDIVIDUAL'S COMMAND

PASSWORD

NORMAL FRONTAGES AND DEPTHS

FRONTAGE	UNIT	DEPTH
300 - 600 yds	Plat	50 - 200 yds
600 - 1200 yds	Co	500 - 700 yds
1200 - 2400 yds	Bn	800 - 1400 yds
2400 - 4800 yds	Regt	1500 - 3000 yds

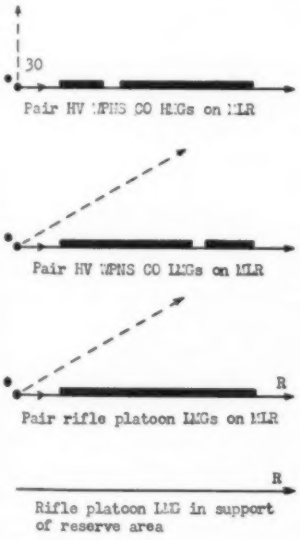
BARRAGES AND CONCENTRATIONS

BARRAGE	WEAPON	CONCENTRATION
50 X 50 yds	60 Mort	50 yds dia
100 X 100 yds	81 Mort	100 yds dia
100 X 200 - 400 yds	4.2 Mort	150 yds dia
100 X 150 - 300 yds	105 How	200 yds dia

MAP COORDINATE CODE

0	1	2	3	4	5	6	7	8	9

FINAL PROTECTIVE FIRE SYMBOLS



Pair HV WPNS CO MGs on MLR

Pair HV WPNS CO MGs on MLR

Pair rifle platoon MGs on MLR

Rifle platoon MG in support of reserve area

TROOP LEADING STEPS

1. Begin Planning
   a. Map reconnaissance
   b. Make quick estimate of situation
   c. Make preliminary plan
2. Arrange For
   a. Movement of unit
   b. Reconnaissance (plan and personnel)
   c. Issuance of order
   d. Coordination
3. Make Reconnaissance
   a. Critical terrain features
   b. Observation of fields of fire
   c. Cover and concealment
   d. Obstacles
   e. Avenues of approach
4. Complete Plan
   a. Receive recommendations
   b. Complete estimate
   c. Make decisions
   d. Prepare order
5. Issue Order
6. Supervise

ESTIMATE OF THE SITUATION

1. Mission
2. Situation and Courses of Action
   a. Considerations affecting possible courses of action (weather, terrain, enemy situations, own situation)
   b. Enemy capabilities
   c. Own courses of action
3. Analysis of opposing Courses of Action
4. Comparison of own Courses of Action
5. Decision (who, what, when, where, how, why)

ARTILLERY FIRE ADJUSTMENT

1. Identity of Observer (Jones, Able Co)
2. Warning Order (Fire Mission)
3. Azimuth (OT) (Azimuth 230)
4. Nature of Target (From Base Point Left 450, Up 20, Add 800)
5. Nature of Target (Heavy Weapons)
6. Type of Adjustment (Salvo Right)
7. Type of Ammunition (Omitted for HE)
8. Fuse Action (Fuse Time)
9. Control (Will Adjust)

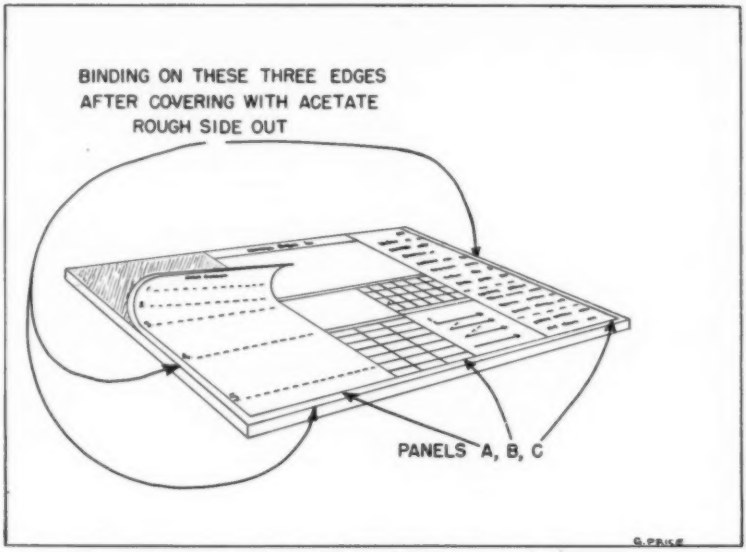


Figure 1. View of "office side" of map board.

Before beginning construction of the map board, you will want to assemble all the necessary materials. Other items can, of course, be substituted for those listed here.

1 piece heavy cardboard (similar to silhouette target), size 9 1/16" x 15".

2 pieces acetate (one side smooth, one side rough), size 9 1/16" x 15".

1 piece waterproof adhesive tape or engineer masking tape, 70" long x ¾" wide.

1 piece waterproof, OD material (similar to scrap shelter half cloth), size 15½" x 20⅛".

1 zipper, open at both ends, length 15".

1 set printed panels A (Operation Order Blank), B (Miscellaneous Notes) and C (Troop Leading Steps). (See Pages 76 and 77.)

2 metal slip clips of any type (those shown in Figure 4 are available from The Book Department, The Infantry School).

There are three steps in making the map board:

1. Cut the heavy cardboard base and the two pieces of acetate to the required size. Carefully remove the three printed panels (A, B and C) from your copy of The Infantry Quarterly and trim them along their outside margin. Paste the three panels to one side of the heavy cardboard, arranging them from left to right in the order A (Operation Order Blank), B (Miscellaneous Notes) and C (Troop Leading Steps). See Figure 1. Use the paste sparingly to avoid warping the heavy cardboard.

2. Lay 1 sheet of the acetate on top of the 3 panels with the rough

side of the acetate to the outside. From the adhesive or masking tape, cut 2 pieces 9 1/16 inches long and 1 piece 15 inches long. Using these strips of tape, bind the acetate to the cardboard along 3 of the edges—leaving the bottom edge open. Next, split the remainder of the tape to get a piece 1/8 inch wide. Cut the tape into 2 pieces 9 1/16 inches long and 1 piece 15 inches long. Use these 3 pieces to bind 3 sides of the other piece of acetate. Now turn the map board so that the printed panels are down and lay the acetate on top of it with the rough side up, so that all unbound edges are together (Figure 2).

3. Take the waterproof material you are going to use as a cover, and along each side of the long axis, fold over 1/4 inch of material and sew in a hem. Separate the zipper into 2 pieces and sew one piece along one end of the cover. Sew a 1/4-inch hem into the other end of the cover. The cover will be approximately 1-inch too long, so you can sew the other half of the zipper back about 1 inch from the end on the inside of the cover, giving a 2-inch protective flap over the zipper to protect it from the rain, mud, etc.

MAJOR STAMEY is a Medical Service Corps OCS graduate. In 1951, he transferred to the Infantry and, in 1953, completed the Infantry Officer Advanced Course. He is currently assigned to the Combat Developments Office of The Infantry School.

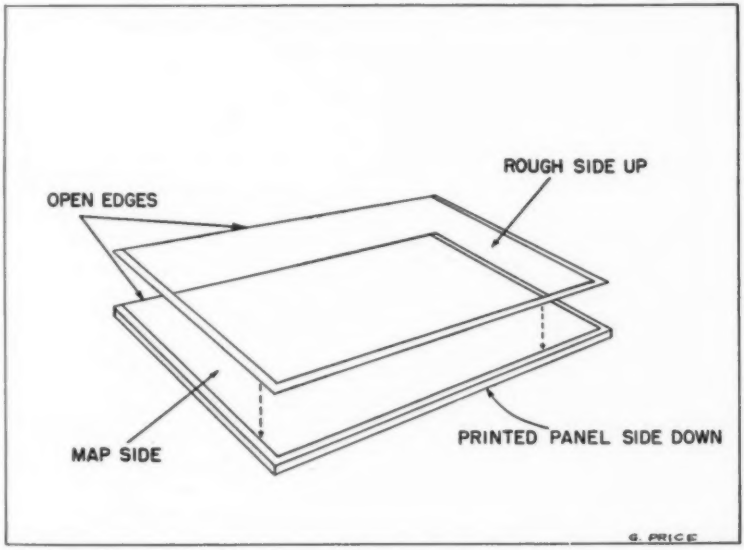


Figure 2. View of "map side" of map board, showing free piece of acetate slightly out of position.

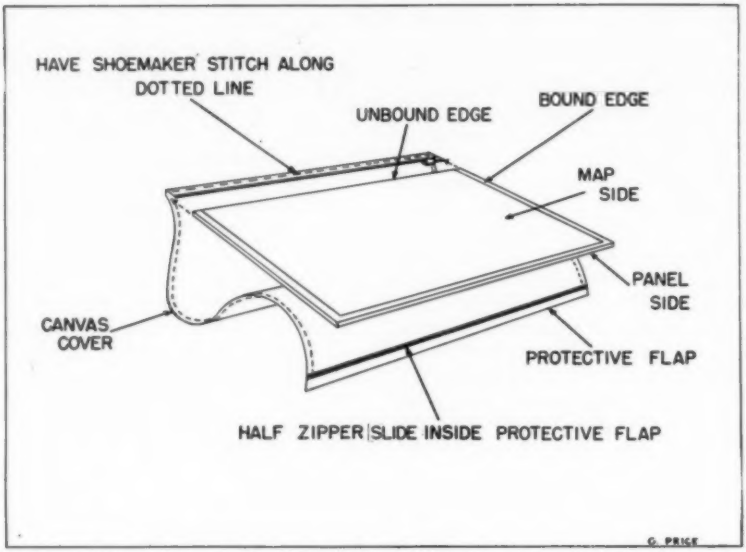
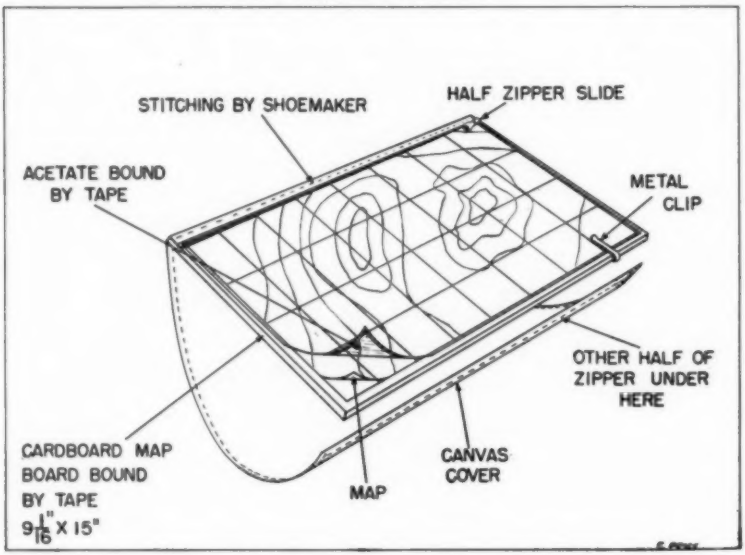


Figure 3. View of "map side" of map board, showing placement of cover prior to final binding by shoemaker.

Figure 4. Open view of completed map board, showing map side, metal clips and zipper arrangement.



Place the cover on the map board so that the end without the protective flap is on the map side and along the unbound edge (Figure 3). Here we need the assistance of a shoemaker. Have him stitch together the cover, the second piece of acetate and the map board along the unbound edge. Your finished map board should resemble the one shown in Figure 4.

You now have a device to aid you in receiving, formulating and issuing field orders; in recording information of vital interest to you and your command; and in following correct troop-leading procedure. It is water-repellent, if not waterproof, and the closed cover will prohibit reflection of sunlight that could give away your position. You will have a hard surface upon which to work and write. You can switch your attention from your map to your order by a simple flick of the board. You can write on the acetate with an ordinary lead pencil or with colored pencils. When you need to erase anything written on the board, use an ordinary pencil eraser, a handkerchief or the palm of your hand.

Good luck to you. If the "old man" tries to rank you out of your new practical field map board, give him a copy of the Infantry Quarterly.

•

BE A MISER!

HOARD those back issues of The Infantry School Quarterly . . . Keep them on file . . . You never know when one will give you just the information you want—!!

•

THE DAY GEORGE WASHINGTON ALMOST GOT HIS . . .

During the French and Indian Wars, George Washington succeeded in persuading a small group of Kentucky riflemen to join General Braddock in an attack on the French-held Fort Duquesne. Stubbornly, Braddock marched his army through the forests exactly as he would cross a parade ground. Inevitably his men were ambushed and cut to shreds as they stood shoulder to shoulder firing blind volleys at the unseen enemy.

When the thinned and broken ranks of Braddock's army began to retreat, the Kentucky riflemen abandoned these suicidal tactics and started to fire at will, making every shot count. Their superlative marksmanship prevented the total destruction of the force and saved the lives of the few hundred survivors, among whom was Washington himself.—Pfc Frederic R. G. Sanborn

THE

EQUALIZER

IMAGINE yourself one of Pershing's lieutenant's fighting Moros in the Philippines at the turn of the century. Picture yourself on a narrow jungle trail, suddenly face to face with your enemy. He is a juramentado[1], sworn to win paradise by slaying unbelievers. He carries a kris, the wicked, wavy sword with which he can whip your head from your shoulders or split it to the collarbone. He is 50 feet away and coming at you.

You snatch at your revolver, a 1903 army-issue Colt. It carries six .38 caliber cartridges; at this range you can't miss. You fire twice, but the body hurtling toward you does not falter. You see him jerk as the third and fourth bullets strike home, but incredibly, he still comes on.

LT SINGLETON KEESLER

Again you fire, and again—the hammer falls upon an empty chamber. The Moro is upon you, his body torn by six slugs, his eyes still flaring with fanaticism and drugs. You try to grapple with him, but your hand slips upon blood, and your eyes dazzle at the great sweep of the kris . . .

This is no fiction, no nightmare. For many an American soldier, the Moro's ability to absorb six pistol bullets proved a fatal reality. The .38 caliber pistol, adequate in Cuba, was no weapon for the Philippines. The situation called for extreme measures.

SHOOTING CORPSES

So, in 1904, within the respectable walls of the Philadelphia Polyclinic, the army conducted strange tests. Ten corpses, sent to the Polyclinic for dissection, were hung up by the neck. From a few feet away, Col. John T. Thompson of the Ordnance Department fired into them with 10 different types of revolvers. Col. Louis A. LaGarde of the Medical Corps estimated the impact of the bullet from the swing of the bodies and later dissected the bodies and X-rayed the wounds. He found that the large cartridges struck with heavier impact and inflicted more severe fractures than smaller calibers.

To test the actual stopping power of the bullets, the experimenters turned to the Chicago Stock Yards. On the killing floor of the Nelson Morris Co., an NCO quick-fired 10 shots into steers about to be slaughtered. The reports made bizzare reading. When shot with a .45 caliber Colt, the steers showed "shock and distress" after the fourth or fifth shots and dropped. A Luger, however, did not disturb them at all: "They evinced no alarm, simply turning their heads at the crack of the weapons and looking at the sergeant inquiringly." Grotesque as these tests may seem, they had very practical results. Together, they proved conclusively the superior stopping power of the larger caliber cartridge, and the army immediately replaced the .38 Colt with an earlier .45 model.

The whole episode is a vivid illustration of the interplay between battlefield and laboratory, the series of combat problems and their solutions which produced the automatic of today.

A STUDY IN EVOLUTION

The history of the pistol is a study in evolution . . . the gradual development of a race of weapons . . . the rivalry of the older forms with new adaptations . . . the survival of the fittest.

Like any old family, this one has produced its oddities. Before the days of the revolver with its rotating breech, weird-looking pistols with several barrels were not uncommon. Much ingenuity was wasted on these freaks: sometimes the barrels were laid in a row as in the Belgian "harmonica," or piled one on top of another like the German Reform, or, like the "pepper boxes" of the 19th Century, in a circular cluster which was turned by hand. There are hybrids too, like the curious Elgin "percussion cutlass-pistol," actually used by American naval officers in the War of 1812. Indeed, the pistol has mated with everything from battle-axes to bicycle handle grips.

Recently, Capt. Khokhlov of the MVD surrendered himself in East Germany . . . He had been assigned

[1] *Juramentado*—Spanish: "bound by oath." These men had undergone ceremonies of purification and vowed to die while killing Christians.

to murder one Georgi Okolovich, and he was armed with two tiny pistols concealed in leather cigarette cases. When the "cigarette cases" opened, flashlight batteries set off the pistols almost noislessly. They fired small lead pellets, designed to stun, and also powerful bullets and dum-dum slugs smeared with potassium cyanide and gum.

Such monsters are, however, offshoots from the family tree. The main line of evolution is clear enough, but where did it actually begin? What is the pedigree of our modern pistol?

Figure 1 shows the demihague. Although noisy and awkward, it was very effective as a psychological weapon. Note the slow fuse, touch hole and forked rest.

HARQUEBUS AND DEMIHAGUE

The primitive ancestor, a caveman among firearms, is a metal tube dug up at Mantua and dated 1322. But not until the end of the 14th Century were firearms common. The musket of this time was called a harquebus or "hooked gun." The grandfather of our pistol was the demihague, about half the size and weight of the harquebus. It consisted of a short metal tube, supported on a forked rest which was fastened to the saddle bow. Like generations of its descendants, the demihague was a cavalryman's weapon. The charge was loaded through the muzzle; to fire it, the trooper thrust a wire, which had to be heated before use, through the touchhole on top of the barrel. (This wire was later replaced by a long, slow-burning cotton wick.) Harquebus and demihague were loaded before the battle and saved for a crucial moment. They probably did little physical damage, but they made a terrifying flash and rattle, destroying morale rather than men.

Experience quickly led to improvements. The touchhole was replaced by a pan on the side of the barrel. The fuse was dipped into the pan where powder had been sprinkled as priming, and a hole in the pan

[2] Pistol—the word is probably derived from the city of Pistoia where the pistol is said to have been invented, or from *pistole*, a coin of the same diameter as its bore.

communicated the flash to the main charge. To aim the heavy barrel with one hand and apply the match with the other—on horseback—must have puzzled the most adroit cavalryman. (See Fig. 1.)

By about 1460, there appeared the serpentine. This was a snaky, S-shaped twist of metal which carried the wick in its jaws and plunged it into the pan at the movement of a finger. Thus was born the first true pistol[2], since a pistol is, by definition, a one-hand weapon.

MATCHLOCK, WHEEL LOCK AND FLINTLOCK

With the serpentine on top of the barrel there was always the danger of flashbacks. So the little lever was moved to the side of the barrel and attached to a trigger. This **matchlock**, however, still required several feet of wick which could scorch the user, discharge the piece by accident, or sputter out in a few drops of rain. Not so with the wheel lock, invented at Nuremberg in 1517. The wheel, a serrated iron disc tucked under the flash pan lid, was wound up against a spring. A pull on the trigger released the spring and set the wheel whirring round. At the same time the lid drew back, a lever, pressed upon it by another spring, fell against the revolving wheel holding a bit of iron pyrites. The resultant sparks from the steel and iron pyrites discharged the piece. The wheel lock was a slow and intricate mechanism, too costly for any but the very rich. Besides, a key was needed to wind it up! Hence, the cruder matchlock remained long in use. Clearly, some new device, cheaper and simpler than the wheel lock and more reliable than the matchlock had to be found.

The answer was the **flintlock.** Instead of iron pyrites, the lever or **doghead** now held a flint, which gave off sparks by striking against a piece of steel attached to the flash-pan lid. This "frizzen" pivoted back, opening the pan to the shower of sparks which ignited the priming. With the flintlock, invented shortly before 1600, we enter the pistol's modern period.

THE MODERN PERIOD

The flintlock remained in military use until the middle of the last century. Most pistols of the Mexican War operated on the same principles as the "snaphaunce" of 250 years before. The same "struggle for survival" which evolved the flintlock from the demihague transformed the flintlock into the Luger and the Colt.

Much that was ornamental and intriguing dropped out along the way. The poetry has gone from nomenclature. How can our stubby Colt compare for beauty with the ornate weapons fashioned by Benvenuto Cellini or the elegant duelling pistols of the 18th Century England? Even its forebears of the 19th Century were at least decorated with pictures of stage coach holdups and naval battles!

The practice of duelling greatly improved the flintlock. In the last quarter of the 18th Century, swords were abandoned for pistols on the field of honor—a long arm and practiced wrist gave too great an advantage to the bully and the bravo. Even the ladies were occasionally called out!

LADIES, PISTOLS AND DUELS

One of the first pistol duels was fought by Lady de Nestle and the Countess of Polignac. A less romantic affair between two ladies of Buffalo, New York, using "Allen's

Revolvers" was prosaically stopped by the police. Except for the duel à **l'outrance**, with the opponents a handkerchief's width from each other, and with only one piece loaded, accuracy in a duelling pistol was—literally—vital. This being true, the weapons became less elaborate, heavier and more efficient.

The early flintlock "pistol" of the American Revolution showed few of these improvements. The Rappahannock Forge Pistol was typical: caliber .69 with a 9-inch, smooth bore barrel and a total length of nearly 16 inches. The interval between trigger pull and discharge made steady aim difficult: the looseness of the ball within the barrel made it almost ineffective. Many revolutionary pistols were not even equipped with sights. Since reloading was a perilously slow business, pistols were usually carried in pairs. They were heavy enough to make a hand club or missile, which perhaps explains why the army of Charles II insisted on pistols at least 14 inches long.

When Major Pitcairn fired on the Lexington Minutemen and shouted "Disperse, ye rebels!" the "shot heard around the world" was, in fact, a pistol shot. Most American officers in those days carried their own pistols of British or French make because the Colonies possessed no official armories (even though Committees of Public Safety and Congress encouraged the manufacture of firearms).

The Rappahannock Forge, established by the Virginia Assembly, contributed a small number of weapons; however, the forge was later dismantled to prevent capture by Banastre Tarleton, the British cavalry officer who was nicknamed "The Butcher" and who was afterwards defeated by Daniel Morgan at Cowpens.

Years later, in 1793, a government inventory showed that the U.S. still owned only 1,225 pistols. Although the first government armory opened at Springfield the next year, its production was devoted mainly to muskets. With both France and England threatening war, Congress voted $800,000—a monster appropriation for the time—for contracts to supplement the Springfield Armory's output.

ENTER SIMEON NORTH

First official pistol maker to the U.S. was Simeon North, of Berlin, Connecticut. The ingenuity of this Yankee farmer and scythe-maker revolutionized the manufacture of firearms. North applied production line methods and invented his own machinery. Previously, a single craftsman completed each weapon and no two examples of the same model were ever exactly identical. Local gunsmiths replaced lost parts with anything that would fit. But North's parts were standardized and interchangeable. He wrote to the

---

LT SINGLETON D. KEESLER. In his article, Lt Keesler has given dramatic impact to what might have been a dull recitation of facts. He received his commission upon graduation from Davidson College in June, 1952. Shortly afterward, he attended the Associate Company Officers Course at The Infantry School and remained as an instructor with the Small Arms Committee of the Weapons Department, TIS.

The author is an expert with several weapons and includes military firearms among his hobbies. He has recently returned to civilian life.

Secretary of the Navy that by assigning one "limb" of a pistol to each workman, he increased both quality and speed. North supplied the government during the War of 1812 and after; he received contract after contract, producing, in all, about 52,000 government pistols between 1799 and 1828. During this time, the price of North's pistols rose from six dollars to an inflationary eight. Pity the soldier who had to sign a statement of charges then!

The flintlock was, as we have seen, at best an uncertain weapon—slow to load, slow to fire, often not firing at all in bad weather or when the flint struck too few sparks. In 1807, Alexander Forsythe discovered how to use a pellet of explosive fulminate for priming. Forsythe, a Scotch clergyman with a passion for sporting firearms and chemistry, carried on experiments in the Tower of London until the ministry changed and he was told to "get his rubbish out of here." Soon, several other inventors brought forward copper percussion caps containing fulminate of mercury. These fitted on a hollow cone which communicated with the main charge and were exploded by a stroke of the hammer. Overloaded caps and low grade copper caused many accidents; besides, our army had a large supply of flintlocks at the time. Consequently, the percussion system was not adopted until 1842. The 1843 model, first to be distributed, was manufactured by Henry Derringer, more famous for his small but high caliber pocket pistols. It was a Derringer which John Wilkes Booth carried to the Ford Theater one evening in 1865 . . .

"DR. COULT, LATE OF LONDON AND CALCUTTA"

Meanwhile, in 1836, Samuel Colt, another Connecticut Yankee, patented his famous revolver. Colt was an adventurer. At 16 he ran away to sea, sailing to India as foremast hand on the brig "Corlo." While still on board, he carved a wooden model of his revolver. The ship's wheel gave him the idea of a circular breech rotating behind a single barrel. To raise capital on his return, he posed as "Dr. Coult, late of London and Calcutta" and lectured on laughing gas! Colt's patents covered not only the revolving breech, but also percussion cap cones for the rear of the chambers, the separation of these by metal walls to prevent simultaneous discharge, and a mechanism locking the chambers in exact alinement with the barrel. So complete were the patents that Colt enjoyed virtually a monopoly until they expired 20 years later.

Colt's new revolver was turned down in 1837 by the Army Ordnance Board, which pronounced it "entirely unsuited to the general purposes of the service." Colt traveled to Flor-

The four pistols on the opposite page represent 70 years of progress. Shown from top to bottom are the 1877 French flintlock, used by American officers in the Revolution; North's 1808 navy pistol, used in the War of 1812 and first pistol with standardized parts; the 1843 Derringer, first percussion pistol issued to the Armed Forces and the 1847 Whitneyville Walker Colt, first and heaviest army issue revolver. (Pictures used in this article, courtesy USMA Museum, Mr. Stowe, Curator.)

Figure 3 shows Colt's first cartridge revolver, the famous 1872 "Peacemaker"—note the large hammer spur for speedy cocking.

ida to prove his point, selling his invention to army officers fighting the Seminoles. The new weapon became popular in the equally new Republic of Texas. Colt named his 1839 model in honor of Captain Walker of the Texas Rangers—the Captain may well have suggested the improvements adopted in the Walker Colt. But the army and the East remained unconverted, and the versatile Colt, his firearms concern bankrupt, turned to mines and underwater cable.

Then came the Mexican War! General Zachary Taylor demanded revolvers, and the government sent Captain Walker to persuade Colt to make them. Legend tells us that Colt was unable to find a single Walker revolver and had to draw his design from memory.

The 1847 Colt was as heavy and as long as the Revolutionary flintlock, weighing 4 pounds, 9 ounces, with a total length of 15½ inches. The barrel was rifled — rifling, though known since Columbus sighted America, only came into fashion with the percussion cap. The 1851 Colt introduced "gain twist" rifling, which progressively tightens the spiral of the

"lands" or ridges within the barrel, thus increasing the bullet's spin without letting it jump the grooves. A detachable stock fitted onto this model, transforming it into a carbine; the stock itself contained a canteen, sometimes even a coffee mill! A later Colt model, the 1860 New Model Army Pistol, was the principal revolver in the Civil War.

M. FLOBERT AND THE METALLIC CARTRIDGE

The Colt revolver still fired the same powder and ball as the flintlock, now usually wrapped in a combustible cartridge of paper or skin. But in 1847, M. Flobert of Paris contrived a practical metallic cartridge and the percussion system was doomed. The breech loader was an old idea—even Henry VIII had owned one. But such weapons, though they permitted the use of bullets larger than the bore, had one fatal weakness. Gas escaped at the breech, reducing chamber pressure and velocity, and thus losing the accuracy gained by a tighter fit. However, the thin-walled metallic cartridge expanded to seal the breech, and the breech-loader—quicker to load, more accurate to fire—was at last a practical reality.

The Rollin White patents for a "cylinder bored end to end" gave the Smith and Wesson Company a monopoly on cartridge revolvers. In 1869 the patents expired, and, three years later, Colt produced his first cartridge revolver, the "Peacemaker," famous on the frontier in cowboy brawl and Indian uprising. Revolvers of this period are by no means obsolete: the famous pearl-handled Colts of General George S. Patton were model 1873!

In 1878, Colt introduced the double action revolver, which cocks and fires with one trigger pull. Colt turned to .38 caliber bores with solid frames and side swing cylinders. These were the weapons which proved so powerless against the Moros; they were replaced by the 1878 model .45. The last revolvers which the army used on a large scale were the Smith and Wesson and the Colt models of 1917. These were manufactured to meet a shortage of automatics in World War I. They were practically twins. Both fired six .45 caliber rimless cartridges carried in two half-moon clips; both were double-action solid frame models measuring about 10¾ inches. The Colt weighs 2 pounds, 8 ounces, the Smith and Wesson 4 ounces less. In 50 years the Colt had shed 2 pounds and nearly 5 inches!

THE SEMI-AUTOMATIC "AUTOMATIC"

Although the army still uses these 1917 revolvers, the standard military pistol is, of course, the "automatic" —a weapon in which the force of the explosion unlocks the mechanism, extracts and ejects the empty shell, and reloads. Actually, these pistols are semi-automatic, since the trigger must be pressed for each shot. A true automatic — well, imagine firing a machine gun with one hand! The first model to appeal was the Borchardt in 1893; the first in this country was designed by that versatile genius, John M. Browning, and manufactured by Colt.

About the same time that Colonels Thompson and LaGarde were experimenting with the .38 and the .45, the army began a series of tests matching the Browning Colt against 10 other automatics, mostly foreign makes. The army saw several advantages in the new pistol; it was less bulky than the revolver, yet faster and easier to reload with a larger

magazine; it avoided the long, hard trigger pull of the revolver and also the loss of gas between cylinder and barrel. The first tests eliminated all but the Luger, Savage and Colt.

Trial by actual service in a cavalry regiment knocked out the Luger, and in final tests, an improved Colt triumphed over the Savage. The army officially adopted it in 1911. Except for improvements added in 1926—wider sights, a longer grip safety and shorter, knurled trigger, the hollow on the receiver for the trigger finger, and the raised and knurled mainspring housing—this is the same model we use today. It has a splendid record of service; it is simple, sturdy, and relatively free from jamming; parts are easily replaced and the action is protected from bad weather. It is a high point in the long evolution of the pistol.

But evolution does not stand still. The Russian Tokarev 7.62 is a fine weapon, too—similar to the 1935 Belgian Browning, lighter and shorter than the Colt, and firing eight shots. Characteristically, it has no safety except a half-cock notch on its hammer. The American weapon employs a disconnector, a grip safety, and a safety lock as well.

Fortunately, combat experience teaches us where the Colt needs improvement. The American soldier is never completely satisfied with his weapons: The Colt's too heavy—it makes a racket and kicks like a Missouri mule—the grip's too big and the angle's wrong! You can't have everything. You can't reduce recoil and muzzle blast and weight at the same time. But the search is on for a better pistol.

A GLANCE INTO THE FUTURE

The army is testing various commercial models chambered for the 9mm Luger cartridge used by most NATO countries. Although the heavier .45 has greater shock power, the 9mm is faster, hence shows flatter trajectory and deeper penetration. Its size allows more bullets per magazine. A likely candidate in these tests is the Colt Commander. It resembles the 1911 Colt in looks and action, but it is an inch shorter and 13 ounces lighter, with a receiver and mainspring of strong lightweight alloy. Other possible features to watch for in a new army pistol: A knurled stock at a more natural angle; a wider sight blade and rear notch, approximating target sights and rounded off for holster use; above all, double action as in the Walther P38, which eliminates handcocking before the first shot.

Army testing techniques have improved since the days of Thompson and LaGarde almost as much as the pistol itself. But their thoroughness has not changed, nor their purpose. Whatever its design, the new army pistol will answer definite combat needs; it will represent another step forward.

As long as conflicts exist between men, they will seek weapons for self-protection. Until such time as armed conflict ceases — we will never be without—the equalizer.

•

There is one thing stronger than all the armies in the world, and that is an idea whose time has come.—Victor Hugo.

HEIGHT OF BATTLE

THE privacy of the battlefield disappeared with the advent of the helicopter. Commanders of regiments, divisions, corps and even armies now have a vehicle that makes it possible for them to maintain control of operations on the battlefields and move their units with greater ease than ever before.

Prior to the Korean conflict, the helicopter was considered another liaison aircraft, to be employed on the same missions and in the same manner as the "Cub" of WWII. When the fighting in Korea began, the Army hurriedly organized four helicopter detachments for shipment to battle areas. The detachments were organized to perform evacuation of casualties on the battlefield.

MAJ ROBERT WINKLER

The first combat missions flown by an army helicopter were initiated at the Hungnam Beachhead and included liaison, patrolling and photographic missions. From the very outset, these machines proved their versatility. There were no experience factors to draw upon for the employment of helicopters. Tactics and techniques gradually evolved as a result of use.

A listing of the methods of employment of helicopters in Korea will point out the versatility of rotary winged aircraft.

USES BY COMMANDERS

Personal Reconnaissance and Control of Operations

Division commanders normally had the helicopter report to the division CP immediately after the morning staff briefing. The division commander or the assistant division commander covered the front by air. Not only did they use the helicopter for reconnaissance, but also to control operations and to make contact with adjacent units. One of the techniques developed early in 1951 proved to be of great value. Just before darkness, the helicopter (usually with the ADC or G3 aboard) patrolled the division front. In this manner each regiment and, in critical areas, each battalion, was visited by a representative of the division who assured himself, on the ground, that units were tied in on their flanks and that protective fires were properly provided for. The commander no longer had to rely on overlays or verbal reports but assured himself that all information concerning the disposition of troops was timely and accurate. At the same time, subordinate commanders were provided with information about terrain and enemy dispositions to their front and the location of adjacent units.

Control of Operations

The CG, with his helicopter for transportation, visited patrol bases, checked the operation of patrols and the conduct of operations across the entire division front. He also obtained a true picture of the terrain and road nets within the division zone that assisted in solving logistical problems.

If one of the regimental commanders or a staff officer could profitably employ the helicopter to perform reconnaissance or to direct operations, it was made available to him. Frequently, when the CG had observed the action of a particular unit, or a vital feature of the terrain, he would land at the CP of that unit and discuss it with the unit commander. He would then direct that commander to go aloft in the helicopter to see for himself the action or terrain in question.

The Chinese offensive of April 1951 provides a good example of the effectiveness of the helicopter. Chinese troops had cut off the Belgian Battalion from the remainder of the 3d Division while furious action was taking place all along the division sector. The G3 made a personal helicopter visit to the cut-off battalion. Communication with division had not been effective and the decision had been made to withdraw, on foot, across a gorge—which made it impossible to evacuate the battalion's vehicles or wounded. By utilizing the helicopter, a reconnaissance was effected which made it possible to find a route for the battalion's vehicles to escape from the position while foot elements moved across the gorge and helicopters

evacuated the wounded. At the same time, the helicopter radio was used with good effect to direct artillery fire and air strikes in support of the withdrawal. The following day the helicopter was used to coordinate the withdrawal of the division. At one point the CCF threatened to cut the main route of withdrawal. The Assistant Division Commander personally directed the force sent to counteract this threat by following the action from the helicopter. Throughout this action, the Division Commander maintained rigid control of his forces because of his ability to maintain contact with all commanders through the use of the helicopter

As an example of helicopter versatility, it must be noted that, at various times, the division engineer speeded his reconnaissance and supervised critical engineer work by utilizing the helicopter to cover the division sector. The G4 reconnoitered for supply routes, the Provost Marshal solved traffic problems, and the tank battalion commander found routes for his tracked vehicles by making combined air and ground reconnaissance.

Evacuation

By far the most publicized and best understood use of the helicopter is in the evacuation of casualties. However, the evacuation of casualties was not—and is not—a normal mission for division helicopters. The helicopter units working with the Mobile Army Surgical Hospitals were assigned that mission. However, when these units could not handle the flow of casualties, the division helicopters were diverted from their normal missions to the evacuation of casualties.

In addition to medical evacuation, small units were evacuated by shuttling. Small units became isolated not only as a result of enemy action but by acts of nature. The rapid run-off of rainfall caused rivers and streams to rise to flood stage rapidly, frequently cutting off patrols and small units. In these situations they were either supplied by helicopter or evacuated. It was possible with the reconnaisance helicopter to evacuate up to three men at a time. Though the small lift capacity was a serious limitation, it was counteracted by the speed with which each lift could be accomplished.

The helicopter was also used to evacuate crews of aircraft downed behind enemy lines. This not only saved critically needed and highly trained personnel, but was a great morale factor for the crews who flew their missions behind enemy lines.

The division helicopter was always ready to answer a distress call from its own aircraft. A pilot whose craft was seriously damaged by enemy fire immediately called the division airstrip and the helicopter was dispatched to the area while other division aircraft maintained a watch and gave running reports of the location of the downed aircraft and enemy troops in the vicinity. Close support by fighter aircraft was rarely provided. This was principally due to lack of communication between army aircraft and fighter aircraft. In several instances, division aircraft observed USAF aircraft downed in front of the division sector. When this occurred, the division helicopter would be dispatched even though the normal air rescue system was also functioning. (The division helicopter was usually much closer to the area than the regular air rescue helicopters and, in such op-

erations, rapid action was essential if the crews were to be picked up before the enemy could capture them). In these cases, the downed aircraft was usually one of a flight, and the wingmates of the downed pilot would provide close covering fire by strafing in a circle around the downed aviator while the helicopter made the pickup.

Patrolling

Helicopters were used effectively to patrol during tactical operations, supplementing ground patrols and air patrols normally maintained by army fixed wing aircraft. The speed of the helicopter enabled it to cover large areas and still hover or land to check details, such as the strength of bridges, the condition of road surfaces or the possibility of mines. It was particularly effective in checking roads or terrain to determine suitability for the passage of tracked vehicles. In one case, a division commander patrolled 10 to 15 miles ahead of his forward elements which were attempting to make contact with the enemy. The information he obtained, most of it negative as applied to the enemy but positive as applied to road conditions and terrain evaluation, did much to speed the operation.

Resupply

The helicopter was irreplaceable as a vehicle for resupplying units up to battalion size with critical items. This was particularly true of units surrounded by the enemy, or cut off from normal channels of supply by flooded streams, or units occupying positions in mountainous terrain that prevented adequate supply by normal methods. Medical items, grenades, rations and water were the principal items delivered by helicopter. Replacement radio sets and batteries were frequently delivered to patrol bases and other isolated units.

Miscellaneous Missions

a. Commanders with vision, or what was in some cases a fertile imagination, found uses for the helicopter that were not to be found in any book. One division commander, after noticing the landing lights with which his helicopter was equipped, queried the pilot as to their power and focusing. Upon being assured that the lights were effective at altitudes of several hundred feet, he directed his pilot to conduct an experiment in night patrolling. Intelligence had been received which indicated that the enemy was using certain roads and trails to move supplies and troops during the hours of darkness to establish patrol bases in a village. The helicopter was flown over the area, and by using the landing lights intermittently, checked the roads and trails in question. The results were not conclusive, but did provide a means of gathering information. It was thought that perhaps the helicopter would prove too vulnerable to ground fire when employed in this fashion. However, experiments with friendly units proved that the helicopter, with all cockpit lights dimmed out, was almost impossible to detect even at low altitudes. It was decided that if this type of night reconnaissance was conducted at irregular intervals and not overdone, it could prove of value during critical times.

b. Another unusual use of the helicopter was picking up prisoners who had just been captured by patrols and transporting them rapidly to the division CP for interrogation. The prisoner was placed on one

of the litters mounted on the outside of the helicopter in the same fashion that a casualty was carried, except that the prisoner was directed to lie on his stomach. It was not necessary to bind the prisoner, for he was initially quite terrified by suddenly looking at the ground from a couple of hundred feet up. In any case, the pilot could have performed violent maneuvers to prevent the prisoner from climbing into the cockpit. The prisoner's usual reaction, however, after a few moments of flight, was to reward the pilot with a large, toothy grin, and an expression which seemed to say, "Whee, what a breeze!"

c. It has been mentioned that reconnaissance for mines was performed by helicopter. It is not possible for the naked eye to detect a carefully concealed minefield from a helicopter. However, due to the excellent visibility afforded by the plastic bubble and the slow speeds of which the helicopter is capable, hastily laid mines, particularly on roads, were detected. This method revealed suspected areas to armored units which were roadbound by flooded rice paddies and soft terrain.

d. Another use of the helicopter was reconnaissance which assisted in the recovery of bridging equipment when bridges were swept away by sudden rainfalls.

e. Columns of refugees were checked rapidly by helicopter, and villages both behind and in advance of the front lines could be checked rapidly by helicopter-transported patrols. Small groups of infiltrators detected by fixed wing aircraft, could be kept under surveillance until patrols were shuttled to their vicinity to capture them.

Early Problems and Techniques of Helicopter Employment

a. Commanders soon learned that the helicopter did its hovering close to the ground on a cushion of air, that it normally made its approaches for landing and takeoffs at a steep angle rather than a vertical one and that wind conditions, particularly when strong gusts and high velocities were involved, did affect the helicopter. They found that landings on reverse slopes, although desirable from the standpoint of not drawing fire, could be difficult if not impossible when strong down drafts were encountered. It became increasingly evident that the capabilities and experience of individual pilots would govern the type of terrain on which they could land.

b. When the helicopter first appeared on the Korean scene and division commanders started dropping in unannounced on regimental and battalion CP's, it was found that sometimes it was difficult to identify battalion CP's. Orders were issued that anytime a helicopter flew over a CP, panels would be displayed or a colored smoke grenade set off. The colored smoke assisted the pilot in determining the surface wind conditions and aided in making landings in confined areas. In their anxiety to expedite these measures, however, many units would choose landing areas that were unsuitable. The greatest single danger to helicopters during this period could probably be listed as communication wire. Although such wires were clearly visible to personnel on the ground, from the air they tended to blend in with the ground and created a serious hazard. Units soon learned to mark such wires with strips of cloth or place them in locations which did not

Mountain Top Landing

interfere with the landing area.

It became standard practice to locate a helicopter landing site at each CP as soon as it was established. A CP located in a draw or on a slope would have a small shelf dug into the bank to provide a level surface for the landing gear of the helicopter.

c. The helicopters used in Korea were limited in fuel capacity to about 1¾-2 hours of flight. To extend the range of the helicopter and save time that would be lost in returning to the airstrip for refueling, each regimental CP was ordered to maintain a supply of aviation gasoline of the proper octane rating as well as a supply of oil. Some divisions mounted racks on the helicopter which permitted two 5 gallon drums to be carried on the helicopter. This was emptied into the regular tank as soon as fuel consumption made it possible to do so, in order to reduce the hazard from enemy fire. Gasoline stored at the CP's in 55 gallon drums collected a great deal of water from condensation. Therefore, it was decided to store

the supply of helicopter fuel in 5 gallon drums.

d. The USMC has led the services in pioneering new techniques for the employment of transport helicopters. They began experiments in 1948 for the helicopter-borne movement of troops. This culminated in the first combat use of helicopters for this purpose in September 1951 in Operation Summit. Units of the 1st Marine Division were ordered to relieve elements of the 1st ROK Corps on Hill 884. Orders were issued on the night of 18 September 1951 for the relief to be accomplished by helicopter-borne troops. A helicopter reconnaissance was made on 19 September (D-3) of the extremely rough terrain. Hill 884 was wooded and rough with 60-70 degree slopes. It was decided that shore parties would first be lowered on ropes to prepare landing sites, using picks, shovels and demolitions. These parties rehearsed debarkation procedures on D-1 while the troops to be lifted were given familiarization with the H-19 type helicopters and supply loads were readied for lift in external slings. Troops, ready at the loading sites two hours before takeoff time, went in on schedule, directed by radio from a control helicopter orbiting the area. Two hundred and forty-seven troops were landed on 2 landing sites in 2 hours. The same helicopters delivered 17,772 pounds of supplies to the same sites in the next two hours. The troop movement would have taken a full day by normal ground means over the difficult terrain.

The first combat use of the helicopter demonstrated very clearly the feasibility of employing helicopters to perform vertical envelopments. Training required for troops is slight, consisting principally of familiarization with the type aircraft to be employed. Troops can be landed, if the landing areas are of sufficient size, in any formation the ground commander desires, thereby preserving the tactical integrity of the units and cutting the time required for assembly to a minimum.

Planning for such operations can be rapid, but should, whenever possible, include at least one rehearsal. Supplies to be delivered in the early phases of the operation can be in mixed-type loads. During later phases, loads can be separated by type and dumps established in the landing area with panel markings for the different classes of supply. This will enable the helicopter pilot to drop his cargo net or pallet in the proper place and obviate the necessity for ground handling of supplies.

Army cargo helicopter units did not arrive in Korea until 1952. They participated in six operations, most of which were logistical support missions. Two involved troop movement, but neither of these can be classified as being of a truly tactical nature. The Transportation Corps, to which the transportation helicopter units belong, seems to consider the helicopter a substitute for the truck and emphasizes logistical support missions at the expense of tactical missions in the forward combat areas. The helicopter can give the added maneuverability that Infantry requires in atomic warfare. The transport helicopter must be considered a tactical vehicle for primary employment in the division zone. Techniques must be developed that will permit every Infantry unit to perform helicopter-borne operations at short notice. In this way, every Infantry unit can constitute the

same threat to the enemy as do present day airborne troops.

e. Increased production of helicopters eventually made it possible to implement the special authorization for four additional helicopters in each division. This did not materially affect the employment of the helicopters. Its principal effect was to make helicopters more available. Considering that one-third were normally undergoing routine maintenance, there were usually 2 or 3 ready for flight at all times. They remained under the same rigid control measures imposed by division commanders.

The military police used helicopters to good advantage at the POW camps at Koje-do. The helicopter provided an excellent vehicle for reconnaissance during disturbances in any of the enclosures. The ring leaders were quickly located and tear gas squads were directed from the air for rapid counter-measures against rioters. Security personnel were prepared to dispense tear gas from the helicopters if necessary.

Lessons Learned

1. The helicopter can perform any mission that can be accomplished by fixed wing observation aircraft. However, due to the high maintenance factor in helicopter operations, and the peculiar flight characteristics of rotary wing aircraft which enable it to land in small areas and fly low and slow, the following rule of thumb should be followed: if a fixed wing aircraft can do the job as well, do not use the helicopter.

2. Maintenance is high on helicopters. Periodic inspections, strictly adhered to, will insure that the helicopter is available the greatest possible amount of time. Don't stretch out the inspection periods on the assumption that the helicopter can't be spared. Such an attitude will result inevitably in the loss of the helicopter for an extended period of time while it undergoes a complete overhaul.

3. Commanders of all units down to platoon level, should be familiar with helicopter operations, capabilities and limitations. This will facilitate helicopter support when urgently needed. A platoon leader who requests helicopter assistance while operating in difficult terrain must be capable of selecting and preparing helicopter landing sites if missions are to be accomplished with a high degree of success.

4. Effective communication facilities must be provided to ensure maximum safety to the helicopter and maximum support for the ground units.

MAJOR ROBERT WINKLER knows the Infantry both on the ground and in the clouds. A 1942 OCS graduate, Major Winkler fought with the 25th Division in the Southwest Pacific and later with the 2nd Armored Division. In 1948, he graduated from the Army Field Forces Liaison Pilots Course and, in 1950, from the Helicopter School. He flew helicopters and light aircraft in Korea.

Having watched and assisted in the amazing development of the helicopter, Major Winkler is just the one to explain this bright, new asset to a streamlined mobile Infantry.

5. Employment of helicopters must be flexible to permit diverting helicopters from one mission to one of greater importance or urgency.

6. Helicopter operation can become critical at high altitudes or in high temperature conditions. Allowance must be made for reduced loads under these conditions.

7. Standard doctrine must be evolved for employment of transport helicopters by Infantry units.

8. Helicopters should be flown to forward landing sites over defiladed routes to preclude detection by enemy observation and to avoid revealing the location of the CP or other installations.

9. Replacement pilots must receive a thorough orientation on terrain, location of friendly units and the tactical situation before they are released for operational missions.

10. Security of helicopter landing sites can be enhanced by preparing the surface in some manner that will prevent dust being blown into the air. The site, whenever possible, should be covered with sod, gravel or used motor oil.

11. If landings must be made at sites open to enemy observation or within range of enemy fire, the helicopter should drop off the passenger and move to a defiladed position until the passenger is ready for pick-up.

The helicopter is versatility personified. A thorough knowledge of the capabilities and limitations of this aircraft is essential to all Infantry leaders. The technological advancement of the Infantry is only as effective as the degree of dissemination and use of such new techniques by individual unit commanders.

DON'T

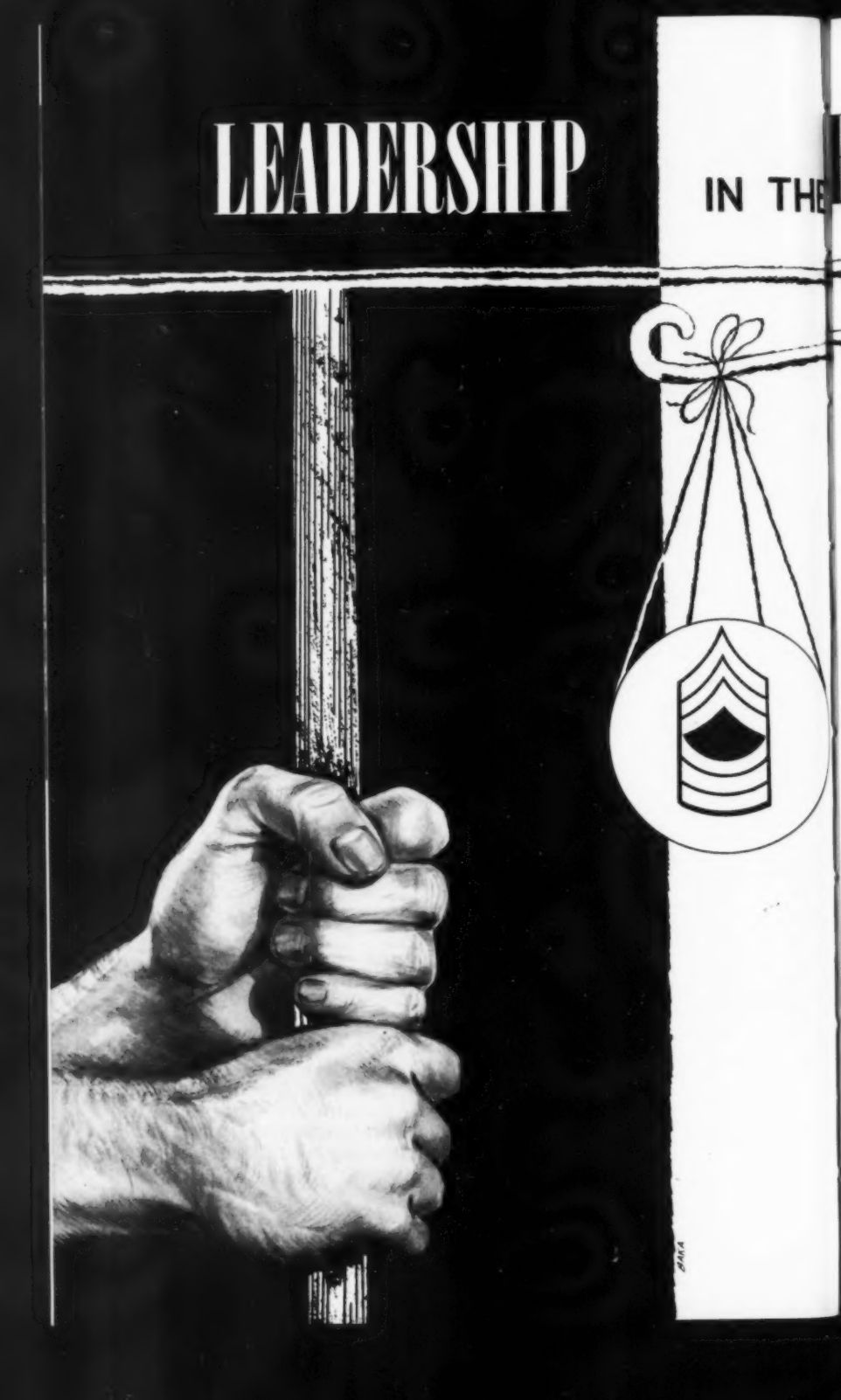
H
O
R
S
E
W
H
I
P

THE EDITOR!

Say it in a letter instead! We learn by our mistakes. Of course, if you LIKE the Quarterly, we want to hear about that, too!

LEADERSHIP

IN THE



THE BALANCE

COMMANDERS who feel that noncommissioned officers have been losing prestige steadily, now have an opportunity to correct this situation. On 1 March 1955, the **NCO-Specialist Rating Plan** becomes effective. This plan is the product of considerable research and many months of high level staffing.

The plan, in its final form, has been overwhelmingly endorsed by 15,000 mature officers and career noncoms recently polled in an army-wide survey. Eighty-two percent of the surveyed group gave their complete acceptance. It is significant that approximately 50% of the noncoms surveyed had seen service prior to 1942 and were familiar with previous efforts along the same line (the old "first and first" ratings and WW II "T" ranks).

The burden of implementing this plan falls upon the unit commander. Under the new system, many prerogatives will be established or re-

CAPT MARION D. JOYCE

turned to the unit commander. Whether specialists have KP, fatigue details and special privileges will, for the most part, be dependent on the unit commander's decision. The relative status of noncoms and specialists with regard to responsibilities, precedence and rank will also be influenced by local policy.

Older noncoms who may have been disillusioned by prior attempts at restoring prestige should have a clear understanding of the new plan. Once they understand it fully, they will find their present fears are groundless.

The Plan

The principal elements of the plan are:

1. The top four grades of enlisted leaders will be noncoms. They will be addressed by grade as they are now.

2. Enlisted men of the top four grades **not in "leader" positions** will be in a separate category and designated as specialists. Regardless of pay grade, they will be addressed as "specialist."

3. Leadership and specialist positions will be indicated in revised T/O&E's and T/D's.

4. The plan calls for no reduction in pay grade.

5. Quarters allowance and travel allowance for dependents will not change since they are authorized by law to pay grades.

6. Priority of assignment to government quarters will be determined by date of promotion to **pay grade.**

7. All NCO's will rank above specialists.

8. Except in extreme emergencies, an NCO will not be detailed as a private of the guard or be put on KP or fatigue duty.

New plan distinguishes leaders from

9. Specialists of the two top pay grades will also be exempt from the duties mentioned in (8) above. Whether other specialists are accorded these and other NCO privileges will depend on the discretion of local commanders.

Can Write Own Ticket . . .

Under the plan, a clear line will be established again between the soldier who has risen in the profession of arms through leadership and the soldier who has risen through his mastery of skills, techniques or administrative procedures (requiring little leadership ability).

One interesting part of the plan is the fact that a soldier can write his own ticket. He may elect to change categories at any time (contingent, of course, on vacancies and his own ability).

At least one month prior to the effective date of the new regulations, top-four-graders in specialist jobs who are being considered for "conversion" will be notified. The soldier may then choose to accept the conversion, or elect to appear before a board of officers. This board will determine whether:

1. The soldier has ever held a position of leadership (as designated by the new T/O) in his present pay grade.

2. He held this position (in his present pay grade) for a minimum of two months, or in a combat zone.

3. The soldier was relieved from this position of leadership for inefficiency.

from Specialists - benefits both.

The board will then recommend that the soldier either retain NCO stripes and status (even though he remains in the specialist position) or be converted to the equivalent specialist rating in pay grade.

Cuts Across Career Fields

Indications are that the NCO-specialist demarcation cuts across so-called "career fields" and MOS structures. For example, (See Figure 1), a cook is a specialist, a mess steward an NCO, and the Regimental Food Service Specialist is a specialist. Progress up the food service "career ladder" from grade E-4 to grade E-7 involves at least two category changes, in addition to one within-category promotion (E-4 to E-5).

Promotions and reductions can be made **in** or **to** either category. A soldier can be converted to the adjacent category **in grade**, provided a T/O slot is open and he meets the qualifications of the position. This provides a very handy instrument for "within-grade" career guidance, award and adjustment.

Here's an example of "within-grade" reward or career guidance. Assume that a First Cook, Specialist Second Class, is an excellent soldier as well as a good cook. His CO feels that he is a potential leader. It seems that no T/O vacancies exist for promotion in either the NCO or specialist category. The CO solves the problem by assigning Cook, Specialist Second Class, as an Assistant Rifle Squad Leader. The CO may accord him full NCO privileges and prerogatives immediately, or can withhold NCO status until the soldier has established his leadership ability in the new category. In either case, the CO explores the leadership potential of a member of his command. The CO can, at the same time, recognize the man's outstanding soldierly performance by granting him NCO status.

Promotion and Category Change

Take the case of Tank Gunner, Specialist Second Class, who is under consideration for promotion. If he desires, and the promoting authority approves, he may "convert" to the NCO field to a T/O position—for example, Tank Commander, SFC. If he prefers the specialist field, or if the unit commander does not wish to convert him to NCO status, he can be promoted to a vacant T/O specialist slot, e.g., Equipment Repairman, Specialist First Class. (Since there is no Equipment Repairman in a tank company, he would have to transfer to a unit requiring that specialty).

Now let us consider another case. Wire Team Chief, Sergeant, faces personal action for inefficiency. The sergeant is an excellent wireman, but seems unable to get the maximum results from his team. Under the plan, at least two possibilities exist. These are:

1. He may be capable of filling a specialist position in his present grade. If so, he may be given the opportunity of retaining his pay grade but lose his NCO status.

2. He may want to remain in the NCO category to prove himself in a lower pay grade NCO position. If a T/O slot for corporal is open, the CO may decide to give him this opportunity.

In attempting to arrive at the decision of whether to remain an NCO or change to a specialist category, a top-four-pay-grader will undoubtedly be guided by the following considerations:

1. **Prestige.** Any NCO will outrank any specialist. Rank, as it pertains to NCO vs. specialist, could be interpreted to mean:

a. The senior NCO will be in charge at formations.

b. The senior NCO will be in charge of details, regardless of participation by higher-paid specialists.

c. The senior NCO will be in charge of, and responsible for: troop quarters, enlisted staff sections, troop units and other installations.

It is in this matter of rank that the leadership of unit commanders will meet a severe test. Problems will arise concerning the relative standing of the NCO who has retained his NCO status and is in a specialist position with more privileges than other specialists of equal or higher pay grade. It should be clearly understood that retaining NCO status in a specialist position does not necessarily confer additional authority or responsibility on the NCO in his specialist job. But the NCO in the specialist position will be called on to perform the duties of an NCO when not engaged in his specialist job. The additional privileges which accrue with his NCO rating are considered adequate compensation for these additional responsibilities.

←

Leadership is the NCO's specialty; his responsibilities are men.

One thing is certain—the NCO should be exactly what his title implies — a noncommissioned officer. His leadership and willingness to assume responsibility are recognized by additional privileges and the respect of subordinates, contemporaries and seniors.

2. **Privileges.** Here, local commanders have an opportunity to enhance the prestige of the NCO and still retain the morale of the specialist. NCO's are traditionally extended special privileges in recognition of their added responsibilities (separate messing facilities, overnight passes, "cadre" quarters, etc.). These privileges may be extended to specialists at the discretion of the local commander.

Membership in NCO clubs will not be denied specialists by Department of the Army, but may be extended or withheld at the discretion of an installation commander.

The new plan aims at the elimination of the paradoxical situation of the present-day corporal and sergeant who are expected to lead and supervise as NCO's, but frequently find themselves wielding a shovel or walking guard post next to the private whom they are supposed to command.

3. **Pay and Allowances.** These are of no consideration, since equal remuneration is provided at each pay grade.

4. **Advancement.** For the junior enlisted man, the initial advantage rests within the specialist field. Ninety-eight percent of all E-4 positions and 60% of the E-5 slots will be filled by specialists (See Chart 2). This picture is sharply reversed as the E-6 and E-7 levels, with 92% and 98% (respectively) of the T/O positions calling for NCO personnel. Since a soldier can "convert" with relative ease from one field to the other, the first decisive choice between the two categories will come when the soldier is ready to step from pay grade E-4 or E-5 to the next higher grade. Actually, advancement **in pay grade** should be facilitated in the E-4 and E-5 grades by the new system. There should be a tendency to promote more freely in the specialist category, since the danger of creating an NCO whose capabilities and inclinations do not measure up to NCO standards has been eliminated.

In view of these considerations, it is believed the main influencing factor in choosing categories will be the

→ **Administration and technical skills are jobs of the specialist.**

capabilities and personality of the individual soldier.

Department of the Army, in instituting the NCO-specialist cleavage, recognizes that not every soldier has concealed in his knapsack the baton of a field marshal. A modern army requires the deft administrator and skilled technician, as well as the gifted leader of men.

The soldier who delights in the properly completed form, the internal mysteries of a radio set or the operation of the internal combustion engine plays a vital part in the over-all functioning of the army. He will not be snatched from behind his desk or workbench or from under a disabled truck and placed in command of a squad, platoon or fatigue detail.

Conversely, the soldier who finds his metier in tactics or the exacting business of influencing the conduct and actions of others will not be subject to duties which destroy that detachment so requisite to command.

Old Master Sergeant Might Like It

The fears of older noncoms that "a pink-cheeked corporal" is going to "pull rank" on former senior NCO's who have converted to specialist ratings will prove groundless in most cases—here's why:

1. E-7 and E-6 specialists are assured (by regulations) certain considerations identical to those accorded NCO's.

2. Most present-day first-three-graders will find it easy to qualify for NCO status by having previously held leadership positions in grade.

3. Applied common sense will prevent the abuse or resentment of "rank." Specialists must understand that accepting a rating which calls for little responsibility for the actions of others will naturally cause them to have to waive their claims to NCO status.

4. With only 2% of all E-4's retaining corporal's stripes in leadership positions, there won't be many corporals around to "pull rank."

Looking back on their own laborious progress through the ranks (back when a corporal was almighty), "Old Army" officers and NCO's may be pleased to note that if the corporal is not again at the right hand of the Diety, he is at least a fairly rare specimen, and has been restored to full NCO status.

Idea Is Not New . . .

Distinctive insignia of grade, limited privileges, sentry duty and KP for soldiers performing specialist functions is not new to the army. Prior to 1942, technicians and specialists all wore the single chevron of the Private First Class, and were subject to the same restrictions, details and duties as other Pfc's and privates. Their rockers were not official.

During World War II, the "T-Model" specialist made his appearance. His insignia consisted of the appropriate number of chevrons (2 or 3, plus a rocker—in some cases) of his pay grade, with a block letter "T" superimposed on a con-

(Table reflects a tabulation of all TO&E's, and indicates percentage of each pay grade which will retain NCO status, and percentage of each pay grade which will be converted to Specialist ratings. Columns 3 and 7 indicate types of TO positions which will be included in NCO and Specialist categories respectively.)

1 Pay Grade	2 Pct of Gr to be NCO	3 Type TO&E Leadership Positions	4 NCO Title	5 Predicted No. 30 June 54	6 Specialist Title	7 Type TO&E Specialist Position	8 Pct of Grade to be Specialist	9 New Specialist Insignia
E-7	98%	Sgt Major 1st Sgt Plat Sgt Opns Sgt Wardmaster	Master Sergeant	48,000	Master Specialist	Court Rptr Chauffer Food Sv Splst Draftsman	02%	
E-6	92%	Rifle Sq Ldr Tank Comdr Sup Sgt Mess Stwd Shop Frmn	Sergeant First Class	82,000	Specialist First Class	Secy-Stenog Terrain In- tell Anly Equipment Rprman Machinist	08%	
E-5	40%	Asst R Sq Ldr FA Gunner Mort Sq Ld Wire Tm Ch	Sergeant	150,000	Specialist Second Class	Stenographer Cook Tank Driver Tank Gunner	60%	
E-4	02%	Ammo Cpl	Corporal	260,000	Specialist Third Class	Rifleman Radio Mech Co Admn Clk AR Gunner	98%	

trasting background below the stripes. For example, a Technician Fifth Grade (Tec/5) wore the stripes of a corporal, plus the "T." (At that time, enlisted pay grades were scaled from Grade 1, master sergeant, to Grade 7, private.) T/O&E's also called for ratings of Tec/4 and a few Tec/3's.

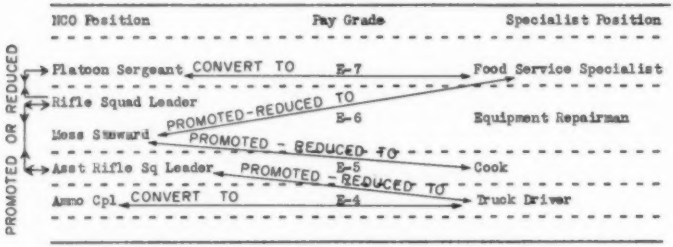
"Not Like a T-5 . . ."

For various reasons, a certain stigma adhered to the "T" ratings. Among other factors was the resentment felt by old-timer NCO's when technicians were granted NCO status, which former specialists had not had. Technicians also ranked all enlisted men in lower pay grades, but ranked below all "line ratings" in the same grade. "Fouled up like a T-5" became the standard GI denunciation of all inept individuals or bungled assignments. The T-ratings disappeared in 1948, and all personnel in the top four pay grades were designated NCO's. This dilution of the NCO rank resulted in a loss of prestige. Many prerogatives and privileges were withdrawn from the NCO. There were entirely too many chiefs, and some frequently had to step down to a less desirable status to get a job done.

Concurrent with the departure of the T-ratings, the controversial "miniature" stripes appeared. To retain prestige for line ratings, different color schemes were prescribed for the "combat unit" NCO and his service unit counterpart. The effectiveness of blue-on-gold insignia (combat unit) and gold on blue stripes (service unit) was debatable. Less than two years after its introduction, the multicolored miniature stripe system disappeared.

PROMOTION, REDUCTION, AND CONVERSION

EXAMPLES



(Examples graphically portrayed above are given as examples only of possibilities which exist under the NCO-Specialist plan. No attempt is made to indicate career patterns, career fields, or recommend career guidance patterns.)

"The Facts, Ma'am . . ."

Here are the facts to remember:

1. The idea of distinctive insignia, different privileges and different areas of responsibility for NCOs' and specialists is nothing new.

2. Much mature thought and planning has gone into the creation of the new NCO-Specialist Plan. The plan itself has been overwhelmingly

endorsed by officers and NCO's polled in an army-wide opinion survey.

3. Sometime early this year, 2% of the Master Sergeants, 8% of the SFC's, 60% of the Sergeants, and 98% of the Corporals of the army will be called on to accept conversion to a specialist category. They can remain NCO's if they prove they are willing to accept the responsibilities of NCO status and are otherwise qualified (See Chart 2).

4. The NCO should find his prestige increased. He will rank all specialists, regardless of pay grade, and will be accorded special privileges commensurate with the responsibility of rank.

5. Specialists should feel happy about the whole thing, too. They may advance in pay grade and receive equal allowances and consideration for government quarters. They will have little or no responsibility for the conduct of soldiers of lower pay status. The new plan should provide a boon to the spirits of the soldier who likes an administrative or technical job, but is not interested in—or has little aptitude for—command.

6. The NCO and specialists E-7 and E-6 will be exempt from KP, fatigue detail (as a laborer) or duty as a private of the guard.

7. Both NCO's and specialists can be promoted or reduced: (a) within the category in which they occupy a T/O position; (b) to the adjacent category in a T/O position or (c) they can be "converted" in grade to a T/O position in the adjacent category.

8. Enlisted men now holding corporal and sergeant ratings will be affected the most (See Chart 2). Sixty percent of sergeants' positions will be converted to Specialist Second Class positions in revised T/O&E's. Ninety-eight percent of the corporal niches will undergo similar conversion. This should have little effect on the E-4's and E-5's who become specialists since they will be performing the same duties and be subject to the same details as before. The change will benefit those E4's and E5's who retain NCO status. They will move up in the world!

CAPT MARION D. JOYCE. Capt Joyce was commissioned in 1949 and served in Germany until 1952. In November, 1953, he attended the Associate Company Officers' Course, The Infantry School, and in March, 1954, was assigned Troop Information Officer for The Infantry Center.

It's Up to You

Commanders and their staffs (from Department of the Army on down) are faced with the king-size task of implementing the NCO-Specialist Rating Plan. T/O&E's and T/D's must be amended to reflect NCO and specialist positions. Provisions must be made for establishing boards of officers to rule on retention of NCO status, and Morning Report abbreviations must be adopted. New insignia will have to be purchased and distributed. Individual records must be screened.

Properly interpreted in both letter and spirit, the plan should result in restoring the NCO to a position of power, prestige and responsibility. This must not be accomplished, however, by the complete loss of prestige or the wholesale demoralization of the newly created specialist.

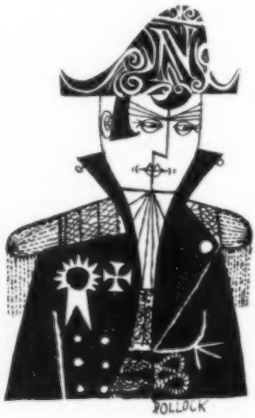
Department of the Army has provided commanders with a means of recognizing leadership. It is like a sensitive scale. Only judicious manipulation can make it work.

Answers . . . to the Quiz

Possible score 100 points. Expert 90-100, Sharpshooter 70-80, Marksmanship 50-60, Recruit 30-40, and Bolo 0-20. For complete detailed discussion of the answers check the references listed below.

1. (4) No filler. (Par 16 and figure 18, FM 23-30.)
2. The steps in planning a lesson are: (1) make an estimate of the situation, (2) select and organize the subject matter, (3) make a lesson plan, (4) rehearse, and (5) make a final check. (FM 21-6, May, 1954, par 26—Infantry School is currently changing to terminology used in FM 21-6.)
3. Primary consideration is given to the condition and composition of the soil, prevailing winds and cover and concealment. Field maintenance facilities are not a factor as it is performed in rear areas by Transportation Corps personnel. The condition of the surface and the prevailing winds are always factors that must be considered. (Ref: FM 20-100, par 29.)
4. 1. Tanks and Infantry on the same axis.
   2. Tanks and Infantry on two converging axes.
   3. Tanks support by fire only.
   (Change 2, FM 7-35.)
5. (3) The Polly Smith portable detector is used in locating metallic objects. (Par 41, c (1) DA Training Circular 34, 1952.)
6. Regimental Counterfire Information Officer. (FM 7-25, par 28.)
7. (3) 2700 yards. (Par 32b, DA Training Circular 31, 1952.)
8. It is used to schedule and record "B," "C," and "D" preventive maintenance services on tactical motor vehicles. (Par 13a, TM 9-2810.)
9. b. The GM Angle is 5° West. (FM 21-26, par 19.)
10. The letter "A" indicates a person absent for authorized reason, not due to misconduct. The letter "D" indicates a person was unavailable because of previous detail or other duty. The letter "U" is the abbreviation when the person is AWOL, in confinement, sick (not in line of duty) or otherwise not available as a result of his own misconduct. (SR 220-205-1.)

WHY WATERLOO?



Would history be different if Napoleon had renewed his subscription in 1815. Frankly, we don't know. We DO know it will save YOU from many a Waterloo! Renew your subscription today!